

Cameco Resources
Smith Ranch - Highland Operation
Ground Water Sampling Field Sheet

Sample Date: 7.8.15

Sampler: Kath

Instrument model 3
Serial # 13F103102
Operator -

Sample Group: MU 1 MONITOR RING
UP/DOWN GRADIENT

page 1 of 2

	WELL			J-TOP	WATER LEVEL	GPM	PURGE		STOP WELL	TEMP f / c	CONDUCT IVITY	D OXYGEN	pH	ORP
	hh	NUMBER	gen				START	FINISH						
1.	up-gradient													
		M-020		514	338 ⁴	12.1	849	*****	*****	13 ³⁰	583	0.16	7.28	-111.6
							908	909						
2.		M-021		500	328	11.4	922	*****	*****	15 ⁴⁵	578	0.33	7.26	-130 ⁰
							940	941						
3.		M-022		510	323	17.1	954	*****	*****	12.91	573	0.53	7.56	-105 ⁵
							1008	1009						
4.		M-023		462	280 ¹	10 ⁸	1026	*****	*****	-	590	unable to use YSI	7.6	-
							1148	1049						
5.		M-024		484	284 ⁶	9 ⁸	1104	*****	*****	13 ³¹	562	0.18	7.38	-215 ²
							1127	1128						
6.	down gradient													
		M-002		560	348 ⁸	11.1	216	*****	*****	12.74	534	0.27	7.33	-107 ⁸
							238	239						
7.		M-003		600	352 ⁴	12 ³	102	*****	*****	13.48	547	0.17	7.32	-98 ⁶
							125	126						
8.		M-004		560	338 ⁸	13	1233	*****	*****	13.83	555	0.14	7.34	-102 ⁶
							1253	1254						
9.		M-005		520	304 ⁶	13	2.32	*****	*****	13.16	543	0.07	7.32	-107 ⁰
							250	252						
10.		M-007		520	284 ²	16	1156	*****	*****	-	560	unable to use YSI	7.60	-
							1214	1215						
11.		M-008		520	300 ⁴	12	759	*****	*****	12.98	527	0.17	7.36	-116 ⁴
							820	821						
12.		M-009		520	312 ²	6.5	713	*****	*****	12.98	524	0.19	7.30	44.2
							745	746						
13.		M-010		560	343 ⁸	12.3	640	*****	*****	12.80	542	0.20	7.34	131 ⁵
							658	659						
14.							*****	*****						
15.							*****	*****						

well head
would not come
off

11

COMMENTS



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 1 of 1

All shaded fields must be completed.

This is a legal document: any misrepresentation may be construed as fraud.

157166

Client Name Cameco Resources	Project Identification MU 1 Down-gradient Monitoring	Sampler (Signature/Attestation of Authenticity) Kathy Amos	Telephone # 307 358 6541
Report Address PO Box 1210 Glenrock WY 82637	Contact Name Larry Wilbanks	ANALYSES / PARAMETERS	
Invoice Address	Email Larry-Wilbanks@cameco.com		
	Phone 307 358 6541 x421		
	Purchase Order # 4500458888		
	Quote #		

Report Address PO Box 1210 glenrock wy 82637				Contact Name Larry Nilbanks			ANALYSES / PARAMETERS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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LAB COMMENTS 5 coolers w 157166	Relinquished By (Signature/Printed) Kathy Amos	DATE 7/8/15	TIME 1330	Received By (Signature/Printed) Mary Anne Valentine	DATE 7/8/15	TIME 1730	Received By (Signature/Printed) Kathy Boyd	DATE 7.9.15	TIME 13:22
	Mary Anne Valentine			Mary Anne Valentine					

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
☐ UPS ☐ Fed Express ☐ US Mail ☒ Hand Carried ☐ Other	Water WT Soil SL Solid SD Filter FT Other OT	Check desired service ☒ Standard turnaround ☐ RUSH - 5 Working Days ☐ URGENT - < 2 Working Days Rush & Urgent Surcharges will be applied	Compliance Monitoring? Y (N) Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y (N) Sample Disposal: Lab Client	

**Date:** 8/6/2015

CLIENT: Power Resources (Cameco)
Project: MU1 Down Gradient Monitoring
Lab Order: S1507158

CASE NARRATIVE
Report ID: S1507158001

Samples M-002, M-003, M-004, M-005, M-007, M-008, M-009, and M-010 were received on July 9, 2015.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition
40 CFR Parts 136 and 141
40 CFR Part 50, Appendices B, J, L, and O
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Qualifiers by sample

S1507290-001 - Nitrogen, Ammonia (as N)/Nitrogen, Ammonia (As N) - Spike Recovery outside accepted recovery limits
S1507290-001 - Nitrogen, Ammonia (as N)/Nitrogen, Ammonia (As N) - Spike Recovery outside accepted recovery limits

Reviewed by:

John Jacobs, Project Manager

Page 1 of 1



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-001
ClientSample ID: M-002
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 2:38:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	199	mg/L		5	SM 2320B	07/10/2015 1820 MRL
Alkalinity, Bicarbonate as HCO ₃	242	mg/L		5	SM 2320B	07/10/2015 1820 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1820 MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1547 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1820 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1327 AMB
Sulfate	94	mg/L		1	EPA 300.0	07/16/2015 1547 AB
Calcium	68	mg/L		1	EPA 200.7	07/13/2015 1600 DG
Magnesium	17	mg/L		1	EPA 200.7	07/13/2015 1600 DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1600 DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1600 DG
Nitrogen, Ammonia (As N)	0.1	mg/L		0.1	EPA 350.1	07/15/2015 1357 AMB
Silica as SiO ₂	17	mg/L		1	EPA 200.7	07/13/2015 1600 DG

General Parameters

pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1820 MRL
Electrical Conductivity	583	µmhos/cm		5	SM 2510B	07/10/2015 1820 MRL
Total Dissolved Solids (180)	370	mg/L		10	SM 2540	07/10/2015 1332 TS

Data Quality

Cation Sum	5.92	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Anion Sum	6.03	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Cation-Anion Balance (± 5%)	0.95	%		0.01	SM 1030E	07/23/2015 1031 JJ
Solids, Total Dissolved (Calc)	350	mg/L		10	SM 1030E	07/23/2015 1031 JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.06	dec. %		0.01	Calculation	08/05/2015 1624 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-001
ClientSample ID: M-002
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 2:38:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1600	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1709	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1709	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1600	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1600	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1709	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1600	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1709	MS
Iron	0.12	mg/L		0.05	EPA 200.7	07/13/2015 1600	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1709	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1600	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1010	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1709	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1600	DG
Selenium	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1709	MS
Uranium	0.0153	mg/L		0.0003	EPA 200.8	07/09/2015 1709	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1709	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1600	DG
Metals - Total							
Iron	0.43	mg/L		0.05	EPA 200.7	07/13/2015 2209	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2209	DG
Radionuclides - Dissolved							
Gross Alpha	30.0	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	2.7	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	18.4	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	12.7	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.4	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.1	pCi/L		1	Ga-Tech	07/28/2015 1208	MB
Radium 228 Precision (±)	1.1	pCi/L			Ga-Tech	07/28/2015 1208	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-002
ClientSample ID: M-003
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 1:25:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	200	mg/L		5	SM 2320B	07/10/2015 1832	MRL
Alkalinity, Bicarbonate as HCO ₃	244	mg/L		5	SM 2320B	07/10/2015 1832	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1832	MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1601	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1832	MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1329	AMB
Sulfate	96	mg/L		1	EPA 300.0	07/16/2015 1601	AB
Calcium	69	mg/L		1	EPA 200.7	07/13/2015 1602	DG
Magnesium	17	mg/L		1	EPA 200.7	07/13/2015 1602	DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1602	DG
Sodium	22	mg/L		1	EPA 200.7	07/13/2015 1602	DG
Nitrogen, Ammonia (As N)	0.1	mg/L		0.1	EPA 350.1	07/15/2015 1358	AMB
Silica as SiO ₂	17	mg/L		1	EPA 200.7	07/13/2015 1602	DG
General Parameters							
pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1832	MRL
Electrical Conductivity	589	µmhos/cm		5	SM 2510B	07/10/2015 1832	MRL
Total Dissolved Solids (180)	380	mg/L		10	SM 2540	07/10/2015 1333	TS
Data Quality							
Cation Sum	6.01	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Anion Sum	6.12	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Cation-Anion Balance (± 5%)	0.94	%		0.01	SM 1030E	07/23/2015 1031	JJ
Solids, Total Dissolved (Calc)	350	mg/L		10	SM 1030E	07/23/2015 1031	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.09	dec. %		0.01	Calculation	08/05/2015 1624	JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-002
ClientSample ID: M-003
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 1:25:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1602	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1714	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1714	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1602	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1602	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1714	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1602	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1714	MS
Iron	0.32	mg/L		0.05	EPA 200.7	07/13/2015 1602	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1714	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1602	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1012	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1714	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1602	DG
Selenium	0.002	mg/L		0.001	EPA 200.8	07/09/2015 1714	MS
Uranium	0.0146	mg/L		0.0003	EPA 200.8	07/09/2015 1714	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1714	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1602	DG
Metals - Total							
Iron	0.33	mg/L		0.05	EPA 200.7	07/13/2015 2213	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2213	DG
Radionuclides - Dissolved							
Gross Alpha	38.1	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	3.2	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	19.9	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	24.5	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.6	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	2.4	pCi/L		1	Ga-Tech	07/28/2015 1509	MB
Radium 228 Precision (±)	1.2	pCi/L			Ga-Tech	07/28/2015 1509	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-003
ClientSample ID: M-004
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 12:53:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	204	mg/L		5	SM 2320B	07/10/2015 1844 MRL
Alkalinity, Bicarbonate as HCO ₃	249	mg/L		5	SM 2320B	07/10/2015 1844 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1844 MRL
Chloride	4	mg/L		1	EPA 300.0	07/16/2015 1614 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1844 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1330 AMB
Sulfate	99	mg/L		1	EPA 300.0	07/16/2015 1614 AB
Calcium	73	mg/L		1	EPA 200.7	07/13/2015 1604 DG
Magnesium	18	mg/L		1	EPA 200.7	07/13/2015 1604 DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1604 DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1604 DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/21/2015 1323 AMB
Silica as SiO ₂	18	mg/L		1	EPA 200.7	07/13/2015 1604 DG

General Parameters

pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1844 MRL
Electrical Conductivity	597	µmhos/cm		5	SM 2510B	07/10/2015 1844 MRL
Total Dissolved Solids (180)	380	mg/L		10	SM 2540	07/10/2015 1334 TS

Data Quality

Cation Sum	6.19	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Anion Sum	6.26	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Cation-Anion Balance (± 5%)	0.57	%		0.01	SM 1030E	07/23/2015 1031 JJ
Solids, Total Dissolved (Calc)	360	mg/L		10	SM 1030E	07/23/2015 1031 JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.06	dec. %		0.01	Calculation	08/05/2015 1624 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calculated Value
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	L	Analyzed by another laboratory
	M	Value exceeds Monthly Ave or MCL or is less than LCL	ND	Not Detected at the Reporting Limit
	O	Outside the Range of Dilutions	S	Spike Recovery outside accepted recovery limits
	X	Matrix Effect		

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-003
ClientSample ID: M-004
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 12:53:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1604	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1720	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1720	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1604	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1604	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1720	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1604	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1720	MS
Iron	0.14	mg/L		0.05	EPA 200.7	07/13/2015 1604	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1720	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1604	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1014	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1720	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1604	DG
Selenium	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1720	MS
Uranium	0.0122	mg/L		0.0003	EPA 200.8	07/09/2015 1720	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1720	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1604	DG
Metals - Total							
Iron	0.15	mg/L		0.05	EPA 200.7	07/13/2015 2220	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2220	DG
Radionuclides - Dissolved							
Gross Alpha	61.2	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	4.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	30.4	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.3	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	60.7	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.9	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.2	pCi/L		1	Ga-Tech	07/28/2015 1810	MB
Radium 228 Precision (±)	1.2	pCi/L			Ga-Tech	07/28/2015 1810	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**Sample Analysis Report**

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-004
ClientSample ID: M-005
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 2:51:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	200	mg/L		5	SM 2320B	07/10/2015 1856	MRL
Alkalinity, Bicarbonate as HCO ₃	244	mg/L		5	SM 2320B	07/10/2015 1856	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1856	MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1628	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1856	MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1332	AMB
Sulfate	100	mg/L		1	EPA 300.0	07/16/2015 1628	AB
Calcium	71	mg/L		1	EPA 200.7	07/13/2015 1609	DG
Magnesium	17	mg/L		1	EPA 200.7	07/13/2015 1609	DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1609	DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1609	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/21/2015 1325	AMB
Silica as SiO ₂	17	mg/L		1	EPA 200.7	07/13/2015 1609	DG
General Parameters							
pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1856	MRL
Electrical Conductivity	592	µmhos/cm		5	SM 2510B	07/10/2015 1856	MRL
Total Dissolved Solids (180)	380	mg/L		10	SM 2540	07/10/2015 1335	TS
Data Quality							
Cation Sum	6.05	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Anion Sum	6.18	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Cation-Anion Balance (± 5%)	1.11	%		0.01	SM 1030E	07/23/2015 1031	JJ
Solids, Total Dissolved (Calc)	360	mg/L		10	SM 1030E	07/23/2015 1031	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.06	dec. %		0.01	Calculation	08/05/2015 1624	JJ

These results apply only to the samples tested.**RL - Reporting Limit**

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-004
ClientSample ID: M-005
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 2:51:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1609	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1725	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1725	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1609	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1609	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1725	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1609	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1725	MS
Iron	0.27	mg/L		0.05	EPA 200.7	07/13/2015 1609	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1725	MS
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 1609	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1016	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1725	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1609	DG
Selenium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1725	MS
Uranium	0.0185	mg/L		0.0003	EPA 200.8	07/09/2015 1725	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1725	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1609	DG
Metals - Total							
Iron	0.28	mg/L		0.05	EPA 200.7	07/13/2015 2222	DG
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 2222	DG
Radionuclides - Dissolved							
Gross Alpha	32.0	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	2.9	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	18.4	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	14.2	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.4	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.4	pCi/L		1	Ga-Tech	07/28/2015 2111	MB
Radium 228 Precision (±)	1.1	pCi/L			Ga-Tech	07/28/2015 2111	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-005
ClientSample ID: M-007
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 12:14:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	188	mg/L		5	SM 2320B	07/10/2015 1909 MRL
Alkalinity, Bicarbonate as HCO ₃	229	mg/L		5	SM 2320B	07/10/2015 1909 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1909 MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1642 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1909 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1333 AMB
Sulfate	107	mg/L		1	EPA 300.0	07/16/2015 1642 AB
Calcium	64	mg/L		1	EPA 200.7	07/13/2015 1622 DG
Magnesium	15	mg/L		1	EPA 200.7	07/13/2015 1622 DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1622 DG
Sodium	23	mg/L		1	EPA 200.7	07/13/2015 1622 DG
Nitrogen, Ammonia (As N)	0.2	mg/L		0.1	EPA 350.1	07/21/2015 1326 AMB
Silica as SiO ₂	17	mg/L		1	EPA 200.7	07/13/2015 1622 DG

General Parameters

pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1909 MRL
Electrical Conductivity	570	µmhos/cm		5	SM 2510B	07/10/2015 1909 MRL
Total Dissolved Solids (180)	360	mg/L		10	SM 2540	07/10/2015 1336 TS

Data Quality

Cation Sum	5.67	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Anion Sum	6.08	meq/L		0.01	SM 1030E	07/23/2015 1031 JJ
Cation-Anion Balance (± 5%)	3.43	%		0.01	SM 1030E	07/23/2015 1031 JJ
Solids, Total Dissolved (Calc)	350	mg/L		10	SM 1030E	07/23/2015 1031 JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.03	dec. %		0.01	Calculation	08/05/2015 1624 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calculated Value
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	L	Analyzed by another laboratory
	M	Value exceeds Monthly Ave or MCL or is less than LCL	ND	Not Detected at the Reporting Limit
	O	Outside the Range of Dilutions	S	Spike Recovery outside accepted recovery limits
	X	Matrix Effect		

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-005
ClientSample ID: M-007
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 12:14:00 PM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1622	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1731	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1731	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1622	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1622	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1731	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1622	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1731	MS
Iron	0.05	mg/L		0.05	EPA 200.7	07/13/2015 1622	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1731	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1622	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1017	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1731	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1622	DG
Selenium	0.004	mg/L		0.001	EPA 200.8	07/09/2015 1731	MS
Uranium	0.0150	mg/L		0.0003	EPA 200.8	07/09/2015 1731	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1731	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1622	DG
Metals - Total							
Iron	0.06	mg/L		0.05	EPA 200.7	07/13/2015 2224	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2224	DG
Radionuclides - Dissolved							
Gross Alpha	20.2	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	2.3	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	17.0	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	12.9	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.4	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	ND	pCi/L		1	Ga-Tech	07/29/2015 012	MB
Radium 228 Precision (±)	NA	pCi/L			Ga-Tech	07/29/2015 012	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-006
ClientSample ID: M-008
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 8:20:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	175	mg/L		5	SM 2320B	07/17/2015 1619	LJK
Alkalinity, Bicarbonate as HCO ₃	214	mg/L		5	SM 2320B	07/17/2015 1619	LJK
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/17/2015 1619	LJK
Chloride	4	mg/L		1	EPA 300.0	07/18/2015 303	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1934	MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1335	AMB
Sulfate	103	mg/L		1	EPA 300.0	07/18/2015 303	AB
Calcium	64	mg/L		1	EPA 200.7	07/20/2015 1334	DG
Magnesium	15	mg/L		1	EPA 200.7	07/20/2015 1334	DG
Potassium	8	mg/L		1	EPA 200.7	07/20/2015 1334	DG
Sodium	24	mg/L		1	EPA 200.7	07/13/2015 1624	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/21/2015 1327	AMB
Silica as SiO ₂	16	mg/L		1	EPA 200.7	07/13/2015 1624	DG
General Parameters							
pH	8.2	s.u.		0.1	SM 4500 H B	07/17/2015 1619	LJK
Electrical Conductivity	545	µmhos/cm		5	SM 2510B	07/10/2015 1934	MRL
Total Dissolved Solids (180)	350	mg/L		10	SM 2540	07/10/2015 1338	TS
Data Quality							
Cation Sum	5.65	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Anion Sum	5.76	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Cation-Anion Balance (± 5%)	0.94	%		0.01	SM 1030E	07/23/2015 1031	JJ
Solids, Total Dissolved (Calc)	340	mg/L		10	SM 1030E	07/23/2015 1031	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.03	dec. %		0.01	Calculation	08/05/2015 1624	JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**Sample Analysis Report**

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-006
ClientSample ID: M-008
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 8:20:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Metals - Dissolved

Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1624 DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1737 MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1737 MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1624 DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1624 DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1737 MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1624 DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1737 MS
Iron	0.19	mg/L		0.05	EPA 200.7	07/13/2015 1624 DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1737 MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1624 DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1019 AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1737 MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1624 DG
Selenium	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1737 MS
Uranium	0.0116	mg/L		0.0003	EPA 200.8	07/09/2015 1737 MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1737 MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1624 DG

Metals - Total

Iron	0.19	mg/L		0.05	EPA 200.7	07/13/2015 2227 DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2227 DG

Radionuclides - Dissolved

Gross Alpha	17.8	pCi/L		2	SM 7110B	07/21/2015 2135 MB
Gross Alpha Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 2135 MB
Gross Beta	13.4	pCi/L		3	SM 7110B	07/21/2015 2135 MB
Gross Beta Precision (±)	1.6	pCi/L			SM 7110B	07/21/2015 2135 MB
Radium 226	13.0	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918 MB
Radium 226 Precision (±)	0.4	pCi/L			SM 7500 Ra-B	07/28/2015 918 MB
Radium 228	ND	pCi/L		1	Ga-Tech	07/29/2015 312 MB
Radium 228 Precision (±)	NA	pCi/L			Ga-Tech	07/29/2015 312 MB

These results apply only to the samples tested.**RL - Reporting Limit**

Qualifiers:	B	Analyte detected in the associated Method Blank	C	Calculated Value
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	L	Analyzed by another laboratory
	M	Value exceeds Monthly Ave or MCL or is less than LCL	ND	Not Detected at the Reporting Limit
	O	Outside the Range of Dilutions	S	Spike Recovery outside accepted recovery limits
	X	Matrix Effect		

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-007
ClientSample ID: M-009
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 7:45:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	177	mg/L		5	SM 2320B	07/10/2015 1947	MRL
Alkalinity, Bicarbonate as HCO ₃	213	mg/L		5	SM 2320B	07/10/2015 1947	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1947	MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1709	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1947	MRL
Nitrogen, Nitrate+Nitrite (as N)	0.3	mg/L		0.1	EPA 353.2	07/13/2015 1336	AMB
Sulfate	93	mg/L		1	EPA 300.0	07/16/2015 1709	AB
Calcium	62	mg/L		1	EPA 200.7	07/13/2015 1627	DG
Magnesium	14	mg/L		1	EPA 200.7	07/13/2015 1627	DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1627	DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1627	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/21/2015 1337	AMB
Silica as SiO ₂	15	mg/L		1	EPA 200.7	07/13/2015 1627	DG
General Parameters							
pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1947	MRL
Electrical Conductivity	536	µmhos/cm		5	SM 2510B	07/10/2015 1947	MRL
Total Dissolved Solids (180)	330	mg/L		10	SM 2540	07/10/2015 1339	TS
Data Quality							
Cation Sum	5.35	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Anion Sum	5.61	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Cation-Anion Balance (± 5%)	2.43	%		0.01	SM 1030E	07/23/2015 1031	JJ
Solids, Total Dissolved (Calc)	320	mg/L		10	SM 1030E	07/23/2015 1031	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.03	dec. %		0.01	Calculation	08/05/2015 1624	JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**Sample Analysis Report**

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-007
ClientSample ID: M-009
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 7:45:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1627	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1742	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1742	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1627	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1627	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1742	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1627	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1742	MS
Iron	ND	mg/L		0.05	EPA 200.7	07/13/2015 1627	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1742	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1627	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1025	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1742	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1627	DG
Selenium	0.003	mg/L		0.001	EPA 200.8	07/09/2015 1742	MS
Uranium	0.0251	mg/L		0.0003	EPA 200.8	07/09/2015 1742	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1742	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1627	DG
Metals - Total							
Iron	0.10	mg/L		0.05	EPA 200.7	07/13/2015 2236	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2236	DG
Radionuclides - Dissolved							
Gross Alpha	33.5	pCi/L		2	SM 7110B	07/21/2015 2135	MB
Gross Alpha Precision (±)	2.7	pCi/L			SM 7110B	07/21/2015 2135	MB
Gross Beta	16.1	pCi/L		3	SM 7110B	07/21/2015 2135	MB
Gross Beta Precision (±)	1.7	pCi/L			SM 7110B	07/21/2015 2135	MB
Radium 226	5.4	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 1121	MB
Radium 226 Precision (±)	0.3	pCi/L			SM 7500 Ra-B	07/28/2015 1121	MB
Radium 228	1.1	pCi/L		1	Ga-Tech	07/29/2015 613	MB
Radium 228 Precision (±)	1.1	pCi/L			Ga-Tech	07/29/2015 613	MB

These results apply only to the samples tested.**RL - Reporting Limit**

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**Sample Analysis Report**

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-008
ClientSample ID: M-010
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 6:58:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	182	mg/L		5	SM 2320B	07/10/2015 1958	MRL
Alkalinity, Bicarbonate as HCO ₃	220	mg/L		5	SM 2320B	07/10/2015 1958	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1958	MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1722	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1958	MRL
Nitrogen, Nitrate+Nitrite (as N)	0.6	mg/L		0.1	EPA 353.2	07/13/2015 1338	AMB
Sulfate	90	mg/L		1	EPA 300.0	07/16/2015 1722	AB
Calcium	62	mg/L		1	EPA 200.7	07/13/2015 1629	DG
Magnesium	14	mg/L		1	EPA 200.7	07/13/2015 1629	DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1629	DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1629	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/21/2015 1338	AMB
Silica as SiO ₂	15	mg/L		1	EPA 200.7	07/13/2015 1629	DG
General Parameters							
pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1958	MRL
Electrical Conductivity	540	µmhos/cm		5	SM 2510B	07/10/2015 1958	MRL
Total Dissolved Solids (180)	340	mg/L		10	SM 2540	07/10/2015 1340	TS
Data Quality							
Cation Sum	5.32	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Anion Sum	5.65	meq/L		0.01	SM 1030E	07/23/2015 1031	JJ
Cation-Anion Balance (± 5%)	3.08	%		0.01	SM 1030E	07/23/2015 1031	JJ
Solids, Total Dissolved (Calc)	320	mg/L		10	SM 1030E	07/23/2015 1031	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.06	dec. %		0.01	Calculation	08/05/2015 1624	JJ

These results apply only to the samples tested.**RL - Reporting Limit**

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/6/2015
Report ID S1507158001

ProjectName: MU1 Down Gradient Monitoring
Lab ID: S1507158-008
ClientSample ID: M-010
COC: 157166

WorkOrder: S1507158
CollectionDate: 7/8/2015 6:58:00 AM
DateReceived: 7/9/2015 1:22:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Metals - Dissolved

Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1629 DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1748 MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1748 MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1629 DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1629 DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1748 MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1629 DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1748 MS
Iron	ND	mg/L		0.05	EPA 200.7	07/13/2015 1629 DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1748 MS
Manganese	0.04	mg/L		0.01	EPA 200.7	07/13/2015 1629 DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1033 AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1748 MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1629 DG
Selenium	0.007	mg/L		0.001	EPA 200.8	07/09/2015 1748 MS
Uranium	0.0268	mg/L		0.0003	EPA 200.8	07/09/2015 1748 MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1748 MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1629 DG

Metals - Total

Iron	ND	mg/L		0.05	EPA 200.7	07/14/2015 025 DG
Manganese	0.04	mg/L		0.01	EPA 200.7	07/14/2015 025 DG

Radionuclides - Dissolved

Gross Alpha	26.4	pCi/L		2	SM 7110B	07/21/2015 2135 MB
Gross Alpha Precision (±)	2.4	pCi/L			SM 7110B	07/21/2015 2135 MB
Gross Beta	15.2	pCi/L		3	SM 7110B	07/21/2015 2135 MB
Gross Beta Precision (±)	1.8	pCi/L			SM 7110B	07/21/2015 2135 MB
Radium 226	2.5	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 1121 MB
Radium 226 Precision (±)	0.2	pCi/L			SM 7500 Ra-B	07/28/2015 1121 MB
Radium 228	ND	pCi/L		1	Ga-Tech	07/29/2015 914 MB
Radium 228 Precision (±)	NA	pCi/L			Ga-Tech	07/29/2015 914 MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
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M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

AlkalinitySample Type **MBLK**

Units: mg/L

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	ND	5						
BLANK (07/17/15 16:12)	RunNo: 123785							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	ND	5						

AlkalinitySample Type **LCS**

Units: mg/L

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	602	5	595		101	90 - 110		
ATQC (07/17/15 16:03)	RunNo: 123785							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	626	5	595		105	90 - 110		

AlkalinitySample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Alkalinity, Bicarbonate as HCO3	243	5	229	5.89		20		
Alkalinity, Carbonate as CO3	ND	5	ND			20		
Alkalinity, Total (As CaCO3)	199	5	188	5.89		20		
S1507290-006A (07/17/15 20:21)	RunNo: 123785							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Alkalinity, Bicarbonate as HCO3	196	5	194	0.669		20		
Alkalinity, Carbonate as CO3	ND	5	ND			20		
Alkalinity, Total (As CaCO3)	166	5	165	0.845		20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

ConductivitySample Type **MBLK**

Units: µmhos/cm

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	ND	5						
BLANK (07/17/15 16:12)	RunNo: 123785							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	ND	5						

ConductivitySample Type **LCS**

Units: µmhos/cm

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	1070	5	1060		101	90 - 110		
ATQC (07/17/15 16:03)	RunNo: 123785							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	1070	5	1060		101	90 - 110		

ConductivitySample Type **DUP**

Units: µmhos/cm

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Electrical Conductivity	571	5	570	0.175		20		
S1507290-006A (07/17/15 20:21)	RunNo: 123785							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Electrical Conductivity	342	5	339	0.881		20		

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Dissolved Mercury by EPA 245.1 - WaterSample Type **MBLK**

Units: mg/L

LRB (07/14/15 13:35)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	ND	0.001						

Dissolved Mercury by EPA 245.1 - WaterSample Type **LCS**

Units: mg/L

LCS (07/14/15 09:04)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	0.002	0.001	0.002		94.5	85 - 115		

Dissolved Mercury by EPA 245.1 - WaterSample Type **MS**

Units: mg/L

S1507158-007D (07/14/15 10:29)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	0.002	0.001	0.00197	ND	93.8	70 - 130		

Dissolved Mercury by EPA 245.1 - WaterSample Type **MSD**

Units: mg/L

S1507158-007D (07/14/15 10:31)	RunNo: 123576							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Mercury	0.002	0.001	0.002	2.69	96.4	20		

Dissolved Mercury by EPA 245.1 - WaterSample Type **DUP**

Units: mg/L

S1507158-007D (07/14/15 10:27)	RunNo: 123576							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	ND	0.001	ND			20		

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	ND	0.1					
Beryllium	ND	0.01					
Boron	ND	0.1					
Chromium	ND	0.01					
Iron	ND	0.05					
Manganese	ND	0.02					
Nickel	ND	0.01					
Zinc	ND	0.01					

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **LCS**

Units: mg/L

DISS LCS Q (07/13/15 12:39)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	1.0	0.1	1		95.3	85 - 115	
Beryllium	1.01	0.01	1		101	85 - 115	
Boron	1.0	0.1	1		98.3	85 - 115	
Chromium	0.99	0.01	1		99.3	85 - 115	
Iron	0.98	0.05	1		98.0	85 - 115	
Manganese	1.02	0.02	1		102	85 - 115	
Nickel	1.01	0.01	1		101	85 - 115	
Zinc	0.98	0.01	1		98.4	85 - 115	

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MS**

Units: mg/L

S1507158-004DS (07/13/15 16:11)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	0.3	0.1	0.25	ND	113	70 - 130	
Beryllium	0.316	0.001	0.25	ND	127	70 - 130	
Boron	0.4	0.1	0.25	ND	122	70 - 130	
Chromium	0.30	0.01	0.25	ND	122	70 - 130	
Iron	0.56	0.05	0.25	0.27	113	70 - 130	
Manganese	0.32	0.01	0.25	0.03	119	70 - 130	
Nickel	0.30	0.05	0.25	ND	119	70 - 130	
Zinc	0.30	0.01	0.25	ND	121	70 - 130	

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MSD**

Units: mg/L

S1507166-003DSD (07/13/15 16:42)		RunNo: 123548					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Aluminum	0.28	0.02	0.27	6.22	110	20	
Beryllium	0.306	0.002	0.288	5.90	122	20	
Boron	0.39	0.03	0.38	4.12	117	20	
Chromium	0.30	0.01	0.28	6.52	118	20	
Iron	0.32	0.02	0.31	4.16	116	20	
Manganese	0.30	0.01	0.28	5.89	116	20	
Nickel	0.29	0.01	0.27	5.27	116	20	
Zinc	0.30	0.01	0.28	6.82	119	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	L	Analyzed by another laboratory	ND	Not Detected at the Reporting Limit
	O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
	S	Spike Recovery outside accepted recovery limits	X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **DUP**

Units: mg/L

S1507158-003DD (07/13/15 16:07)		RunNo: 123548					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Aluminum	ND	0.1	ND			20	
Beryllium	ND	0.001	ND			20	
Boron	ND	0.1	ND			20	
Chromium	ND	0.01	ND			20	
Iron	0.13	0.05	0.14	4.06		20	
Manganese	0.02	0.01	0.02	4.08		20	
Nickel	ND	0.05	ND			20	
Zinc	ND	0.01	ND			20	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MBLK**

Units: mg/L

MBLK (07/09/15 13:47)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	ND	0.005					
Barium	ND	0.1					
Cadmium	ND	0.001					
Copper	ND	0.01					
Lead	ND	0.02					
Molybdenum	ND	0.02					
Selenium	ND	0.001					
Uranium	ND	0.0003					
Vanadium	ND	0.02					

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **LCS**

Units: mg/L

LCS (07/09/15 13:41)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	0.104	0.005	0.1		104	85 - 115	
Barium	0.1	0.1	0.1		101	85 - 115	
Cadmium	0.100	0.001	0.1		99.5	85 - 115	
Copper	0.10	0.01	0.1		104	85 - 115	
Lead	0.10	0.02	0.1		101	85 - 115	
Molybdenum	0.10	0.02	0.1		97.1	85 - 115	
Selenium	0.101	0.001	0.1		101	85 - 115	
Uranium	0.102	0.0003	0.1		102	85 - 115	
Vanadium	0.10	0.02	0.1		102	85 - 115	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MS**

Units: mg/L

S1507157-004DS (07/09/15 16:42)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	1.10	0.001	1.1	ND	100	70 - 130	
Barium	1.1	0.1	1.1	ND	99.4	70 - 130	
Cadmium	1.11	0.001	1.1	ND	101	70 - 130	
Copper	1.10	0.01	1.1	ND	100	70 - 130	
Lead	1.11	0.01	1.1	ND	101	70 - 130	

Qualifiers:

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
O Outside the Range of Dilutions
S Spike Recovery outside accepted recovery limits

E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MS**

Units: mg/L

S1507157-004DS (07/09/15 16:42)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Molybdenum	1.08	0.01	1.1	ND	97.9	70 - 130	
Selenium	1.06	0.001	1.1	0.007	95.7	70 - 130	
Uranium	1.12	0.0003	1.1	0.0014	101	70 - 130	
Vanadium	1.1	0.1	1.1	ND	102	70 - 130	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MSD**

Units: mg/L

S1507157-004DMSD (07/09/15 16:47)		RunNo: 123411					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	1.12	0.001	1.10	1.19	101	20	
Barium	1.1	0.1	1.1	2.30	102	20	
Cadmium	1.12	0.001	1.11	0.931	102	20	
Copper	1.13	0.01	1.10	1.98	102	20	
Lead	1.15	0.01	1.11	3.19	104	20	
Molybdenum	1.14	0.01	1.08	5.37	103	20	
Selenium	1.07	0.001	1.06	1.03	96.7	20	
Uranium	1.16	0.0003	1.12	4.04	106	20	
Vanadium	1.1	0.1	1.1	0.340	102	20	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **DUP**

Units: mg/L

S1507157-004DD (07/09/15 16:36)		RunNo: 123411					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Arsenic	ND	0.001	ND			20	
Barium	ND	0.1	ND			20	
Cadmium	ND	0.001	ND			20	
Copper	ND	0.01	ND			20	
Lead	ND	0.01	ND			20	
Molybdenum	ND	0.01	ND			20	
Selenium	0.006	0.001	0.007	7.05		20	
Uranium	0.0014	0.0003	0.0014	0.587		20	
Vanadium	ND	0.1	ND			20	

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Fluoride by SM 4500Sample Type **MBLK**

Units: mg/L

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	ND	0.1						

Fluoride by SM 4500Sample Type **LCS**

Units: mg/L

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	3.1	0.1	3		103	85 - 115		

Fluoride by SM 4500Sample Type **MS**

Units: mg/L

S1507166-006A (07/10/15 21:24)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	3.3	0.1	2.5	0.5	110	80 - 120		

Fluoride by SM 4500Sample Type **MSD**

Units: mg/L

S1507166-006A (07/10/15 21:28)	RunNo: 123475							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Fluoride	3.2	0.1	3.3	0.471	109	20		

Fluoride by SM 4500Sample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Fluoride	0.3	0.1	0.3	2.17		20		

Gross Alpha, Beta by SM 7110BSample Type **MBLK**

Units: pCi/L

MB-335 (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	ND	2						
Gross Beta (Dissolved)	ND	3						

Gross Alpha, Beta by SM 7110BSample Type **LCS**

Units: pCi/L

LCS-335 (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	79	2	72.6		109	59.5 - 130		
Gross Beta (Dissolved)	133	3	118		113	80 - 122		

Gross Alpha, Beta by SM 7110BSample Type **MS**

Units: pCi/L

S1507158-007F MS (07/21/15 21:35)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	98	2	72.6	34	89.4	50 - 150		
Gross Beta (Dissolved)	155	3	118	16	118	61.4 - 150		

Gross Alpha, Beta by SM 7110BSample Type **DUP**

Units: pCi/L

S1507157-002F DUP (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Gross Alpha (Dissolved)	95	2	115	18.9		20		
Gross Beta (Dissolved)	41	3	42	3.86		20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Anions by ION ChromatographySample Type **MBLK**

Units: mg/L

BLK (07/16/15 11:56)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	ND	1					
Sulfate	ND	1					

BLK (07/18/15 00:20)		RunNo: 123815					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	ND	1					
Sulfate	ND	1					

Anions by ION ChromatographySample Type **LCS**

Units: mg/L

DIONEX (07/16/15 11:02)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	30	1	30		98.6	90 - 110	
Sulfate	142	1	150		94.6	90 - 110	

DIONEX (07/18/15 00:33)		RunNo: 123815					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	30	1	30		100	90 - 110	
Sulfate	143	1	150		95.2	90 - 110	

Anions by ION ChromatographySample Type **MS**

Units: mg/L

S1507157-004ASPK (07/16/15 14:39)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	57	1	54.5	2	100	80 - 120	
Sulfate	529	1	409	104	104	80 - 120	

S1507227-001ASPK (07/18/15 04:38)		RunNo: 123815					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	247	1	236	17	97.3	80 - 120	
Sulfate	4720	1	1770	2890	103	80 - 120	

Anions by ION ChromatographySample Type **MSD**

Units: mg/L

S1507157-004ASPK (07/16/15 14:53)		RunNo: 123728					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Chloride	57	1	57	0.115	100	20	
Sulfate	530	1	529	0.178	104	20	

S1507227-001ASPK (07/18/15 04:52)		RunNo: 123815					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Chloride	247	1	247	0.132	97.2	20	
Sulfate	4700	1	4720	0.581	102	20	

Anions by ION ChromatographySample Type **DUP**

Units: mg/L

S1507157-004A (07/16/15 14:26)		RunNo: 123728					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Chloride	2	1	2	0.0963		20	

Qualifiers:

- B Analyte detected in the associated Method Blank
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- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Anions by ION ChromatographySample Type **DUP**

Units: mg/L

S1507157-004A (07/16/15 14:26)	RunNo: 123728						
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Sulfate	104	1	104	0.106		20	
S1507227-001A (07/18/15 04:25)	RunNo: 123815						
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Chloride	17	1	17	0.0159		20	
Sulfate	2900	1	2890	0.0561		20	

Cations by ICP (Method 200.7)Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)	RunNo: 123540						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	ND	1					
Magnesium	ND	1					
Potassium	ND	1					
Sodium	ND	1					
MBLK DISS/CAT (07/20/15 13:21)	RunNo: 123853						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	ND	1					
Magnesium	ND	1					
Potassium	ND	1					
Sodium	ND	1					

Cations by ICP (Method 200.7)Sample Type **LCS**

Units: mg/L

CAT LCS IML3 (07/13/15 12:41)	RunNo: 123540						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	38	1	40		95.2	85 - 115	
Magnesium	41	1	40		102	85 - 115	
Potassium	38	1	40		95.3	85 - 115	
Sodium	39	1	40		97.2	85 - 115	
CAT LCS IML3 (07/20/15 13:25)	RunNo: 123853						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	40	1	40		98.9	85 - 115	
Magnesium	41	1	40		103	85 - 115	
Potassium	39	1	40		97.6	85 - 115	
Sodium	39	1	40		97.1	85 - 115	

Cations by ICP (Method 200.7)Sample Type **MS**

Units: mg/L

S1507158-004AS (07/13/15 16:11)	RunNo: 123540						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	96	1	25	71	102	70 - 130	
Magnesium	46	1	25	17	115	70 - 130	
Potassium	39	1	25	8	124	70 - 130	
Sodium	50	1	25	21	117	70 - 130	

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
O Outside the Range of Dilutions
S Spike Recovery outside accepted recovery limits

E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Cations by ICP (Method 200.7)Sample Type **MS**

Units: mg/L

S1507290-004AS (07/20/15 15:25)		RunNo: 123853					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	59	1	25	30	117	70 - 130	
Magnesium	37	1	25	8	112	70 - 130	
Potassium	35	1	25	6	116	70 - 130	
Sodium	47	1	25	19	109	70 - 130	

Cations by ICP (Method 200.7)Sample Type **MSD**

Units: mg/L

S1507166-003ASD (07/13/15 16:42)		RunNo: 123540					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Calcium	64	1	63	2.01	107	20	
Magnesium	48	1	47	2.04	109	20	
Potassium	36	1	34	4.28	120	20	
Sodium	50	1	48	4.31	103	20	

S1507290-004ASD (07/20/15 15:28)		RunNo: 123853					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Calcium	61	1	59	2.62	123	20	
Magnesium	37	1	37	0.693	113	20	
Potassium	35	1	35	0.334	116	20	
Sodium	47	1	47	1.66	112	20	

Cations by ICP (Method 200.7)Sample Type **DUP**

Units: mg/L

S1507158-003AD (07/13/15 16:07)		RunNo: 123540					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Calcium	69	1	73	4.66		20	
Magnesium	17	1	18	4.94		20	
Potassium	8	1	8	4.06		20	
Sodium	20	1	21	2.04		20	

S1507288-001AD (07/20/15 14:24)		RunNo: 123853					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Calcium	171	1	168	2.07		20	
Magnesium	167	1	165	1.07		20	
Potassium	17	1	16	1.58		20	
Sodium	172	1	170	1.21		20	

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Nitrogen, Ammonia (as N)Sample Type **MBLK**

Units: mg/L

BLANK (07/15/15 12:34)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	ND	0.1						
BLANK (07/21/15 13:07)	RunNo: 123916							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	ND	0.1						

Nitrogen, Ammonia (as N)Sample Type **LCS**

Units: mg/L

QC (07/15/15 12:37)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	2.5	0.1	2.5		101	89 - 111		
QC (07/21/15 13:10)	RunNo: 123916							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	2.6	0.1	2.5		103	89 - 111		

Nitrogen, Ammonia (as N)Sample Type **MS**

Units: mg/L

S1507239-005B (07/15/15 13:39)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	4.1	0.1	2.5	1.5	103	90 - 110		
S1507290-001B (07/21/15 14:34)	RunNo: 123916							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	1.9	0.1	2.5	ND	70.8	90 - 110	S	

Nitrogen, Ammonia (as N)Sample Type **MSD**

Units: mg/L

S1507239-005B (07/15/15 13:41)	RunNo: 123650							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	4.0	0.1	4.1	0.670	102	20		
S1507290-001B (07/21/15 14:35)	RunNo: 123916							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	1.9	0.1	1.9	0.639	70.3	20	S	

Nitrogen, Ammonia (as N)Sample Type **DUP**

Units: mg/L

S1507239-005B (07/15/15 13:38)	RunNo: 123650							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	1.8	0.1	1.5	18.3		20		
S1507290-001B (07/21/15 14:33)	RunNo: 123916							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	ND	0.1	ND			20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Nitrogen, Nitrate-Nitrite (as N)Sample Type **MBLK**

Units: mg/L

BLANK (07/13/15 09:35)	RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Nitrate-Nitrite (as N)	ND	0.1						

Nitrogen, Nitrate-Nitrite (as N)Sample Type **LCS**

Units: mg/L

QC (07/13/15 09:38)	RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Nitrate-Nitrite (as N)	18.5	0.1	17.7		105	90 - 110		

Nitrogen, Nitrate-Nitrite (as N)Sample Type **MS**

Units: mg/L

S1507158-008C (07/13/15 13:41)	RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Nitrate-Nitrite (as N)	3.1	0.1	2.5	0.6	99.9	90 - 110		

Nitrogen, Nitrate-Nitrite (as N)Sample Type **MSD**

Units: mg/L

S1507158-008C (07/13/15 13:42)	RunNo: 123512							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Nitrate-Nitrite (as N)	3.1	0.1	3.1	0.0982	99.8	20		

Nitrogen, Nitrate-Nitrite (as N)Sample Type **DUP**

Units: mg/L

S1507158-008C (07/13/15 13:39)	RunNo: 123512							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Nitrate-Nitrite (as N)	0.5	0.1	0.6	1.81		20		

Radium 228 by Ga/TechSample Type **MBLK**

Units: pCi/L

MB-10537 (07/26/15 11:53)	RunNo: 124307	PrepDate: 07/15/15 12:00	BatchID 10537					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Radium 228 (Dissolved)	ND	1						

Radium 228 by Ga/TechSample Type **LCS**

Units: pCi/L

LCS-10537 (07/26/15 14:54)	RunNo: 124307	PrepDate: 07/15/15 12:00	BatchID 10537					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Radium 228 (Dissolved)	38	1	39.2		97.4	60 - 120		

Radium 228 by Ga/TechSample Type **MSD**

Units: pCi/L

MS-10537 (07/26/15 23:57)	RunNo: 124307	PrepDate: 07/15/15 12:00	BatchID 10537					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Radium 228 (Dissolved)	36	1	ND		91.1			
Total Radium 228	36	1	ND		91.1			

Qualifiers:

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
O Outside the Range of Dilutions
S Spike Recovery outside accepted recovery limits

E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Radium 226 in Water - DissolvedSample Type **MBLK**

Units: pCi/L

MB-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

ND

0.2

Radium 226 in Water - DissolvedSample Type **LCS**

Units: pCi/L

LCS-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

4.6

0.2

5.03

92.3

67.6 - 120

Radium 226 in Water - DissolvedSample Type **MS**

Units: pCi/L

MS-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

4.6

0.2

5.03

ND

91.4

69.4 - 120

Radium 226 in Water - DissolvedSample Type **MSD**

Units: pCi/L

MSD-1488 (07/28/15 09:18)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	

Radium 226 (Dissolved)

4.7

0.2

4.6

2.27

93.5

20

Silica as SiO2Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)	RunNo: 123550							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Silica as SiO2

ND

0.1

Silica as SiO2Sample Type **LCS**

Units: mg/L

DISS LCS Q (07/13/15 12:39)	RunNo: 123550							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Silica as SiO2

2.1

0.1

2.14

98.7

85 - 115

Silica as SiO2Sample Type **MSD**

Units: mg/L

S1507158-004DSD (07/13/15 16:13)	RunNo: 123550							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	

Silica as SiO2

16

1

16

1.81

20

Silica as SiO2Sample Type **DUP**

Units: mg/L

S1507158-003DD (07/13/15 16:07)	RunNo: 123550							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Silica as SiO2

17

1

18

4.45

20

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

Solids By SM 2540Sample Type **MBLK**

Units: mg/L

DI (07/10/15 13:25)	RunNo: 123604							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Total Dissolved Solids (180)	ND	10						

Solids By SM 2540Sample Type **LCS**

Units: mg/L

CONTROL (07/10/15 13:26)	RunNo: 123604							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Total Dissolved Solids (180)	220	10	226		98.2	90 - 110		

Solids By SM 2540Sample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 13:37)	RunNo: 123604							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Total Dissolved Solids (180)	370	10	360	0.548		20		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MBLK**

Units: mg/L

MB-10434 (07/13/15 21:57)	RunNo: 123559	PrepDate: 07/10/15 13:07	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	ND	0.05						
Manganese	ND	0.02						

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **LCS**

Units: mg/L

LCS-10434 (07/13/15 20:39)	RunNo: 123559	PrepDate: 07/10/15 13:07	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	0.47	0.05	0.5		93.5	85 - 115		
Manganese	0.19	0.02	0.2		93.9	85 - 115		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MS**

Units: mg/L

S1507158-002ES (07/13/15 22:15)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	0.81	0.05	0.5	0.33	96.5	70 - 130		
Manganese	0.21	0.01	0.2	0.02	92.4	70 - 130		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MSD**

Units: mg/L

S1507158-002EMSD (07/13/15 22:18)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Iron	0.78	0.05	0.81	4.30	89.7	20		
Manganese	0.21	0.01	0.21	1.01	91.3	20		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **DUP**

Units: mg/L

S1507158-001ED (07/13/15 22:11)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Iron	0.42	0.05	0.43	1.52		20		
Manganese	0.02	0.01	0.02	1.26		20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507158
Project: MU1 Down Gradient Monitoring

Date: 8/6/2015
Report ID: S1507158001

pH WaterSample Type **LCS**

Units: s.u.

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
pH	8.7	0.1	8.6		101	90 - 110		
ATQC (07/17/15 16:03)	RunNo: 123785							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
pH	8.8	0.1	8.6		102	90 - 110		

pH WaterSample Type **DUP**

Units: s.u.

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
pH	8.3	0.1	8.3	0.0189		20		
S1507227-002A (07/17/15 16:58)	RunNo: 123785							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
pH	3.8	0.1	3.8	0.0909		20		

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 1 of 1

All shaded fields must be completed.

This is a legal document; any misrepresentation may be construed as fraud.

157165

Client Name Comeco Resources	Project Identification MU 1 Up-gradient Monitor Ring	Sampler (Signature/Attestation of Authenticity) Kathy Amos	Telephone # 307 358 6541
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Report Address PO Box 1210 Glenrock WY 82637	Contact Name Larry W. Banks	ANALYSES / PARAMETERS
Invoice Address	Email Larry - Wilbanks @comeco.com	
	Phone 307 358 6541 x427	

Purchase Order # 4500458888	Quote #
---------------------------------------	---------

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers						COOLER TEMP	REMARKS
1	51507157-001	6/8/15	908	M-020	WT	7	X					9.7	Filtered & preserved in field
2	002	✓	940	M-021	✓	✓	✓					9.7	✓
3	003	✓	1008	M-022	✓	✓	✓					9.7	✓
4	004	✓	1048	M-023	✓	✓	✓					10.0	✓
5	005	✓	1127	M-024	✓	✓	✓					10.0	✓
6													
7													
8													
9													
10													
11													
12													
13													
14													

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
5 coolers w/ 157165	Kathy Amos	6/8/15	330	Mary Anne Valentine	7/8/15	1535
	Mary Anne Valentine	7/8/15	1730	Kathy Boyo	7.9.15	13:20

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
☐ UPS ☐ Fed Express ☐ US Mail ☒ Hand Carried ☐ Other _____	Water WT Soil SL Solid SD Filter FT Other OT	Check desired service ☒ Standard turnaround ☐ RUSH - 5 Working Days ☐ URGENT - < 2 Working Days Rush & Urgent Surcharges will be applied	Compliance Monitoring? Y ☒ N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y ☒ N Sample Disposal: Lab Client	

**Date:** 8/5/2015

CLIENT: Power Resources (Cameco)
Project: MU1 Up-gradient Monitor Ring
Lab Order: S1507157

CASE NARRATIVE
Report ID: S1507157001

Samples M-020, M-021, M-022, M-023, and M-024 were received on July 9, 2015.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition
40 CFR Parts 136 and 141
40 CFR Part 50, Appendices B, J, L, and O
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Reviewed by:

John Jacobs, Project Manager

Page 1 of 1



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-001
ClientSample ID: M-020
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 9:08:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	217	mg/L		5	SM 2320B	07/10/2015 1718	MRL
Alkalinity, Bicarbonate as HCO ₃	265	mg/L		5	SM 2320B	07/10/2015 1718	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1718	MRL
Chloride	4	mg/L		1	EPA 300.0	07/16/2015 1331	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1718	MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1310	AMB
Sulfate	104	mg/L		1	EPA 300.0	07/16/2015 1331	AB
Calcium	75	mg/L		1	EPA 200.7	07/13/2015 1542	DG
Magnesium	19	mg/L		1	EPA 200.7	07/13/2015 1542	DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1542	DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1542	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/15/2015 1350	AMB
Silica as SiO ₂	18	mg/L		1	EPA 200.7	07/13/2015 1542	DG

General Parameters

pH	8.1	s.u.		0.1	SM 4500 H B	07/10/2015 1718	MRL
Electrical Conductivity	616	µmhos/cm		5	SM 2510B	07/10/2015 1718	MRL
Total Dissolved Solids (180)	400	mg/L		10	SM 2540	07/10/2015 1327	TS

Data Quality

Cation Sum	6.41	meq/L		0.01	SM 1030E	07/17/2015 1042	BC
Anion Sum	6.64	meq/L		0.01	SM 1030E	07/17/2015 1042	BC
Cation-Anion Balance (± 5%)	1.75	%		0.01	SM 1030E	07/17/2015 1042	BC
Solids, Total Dissolved (Calc)	380	mg/L		10	SM 1030E	07/17/2015 1042	BC
Calculated TDS/TDS Ratio (0.80-1.20)	1.05	dec. %		0.01	Calculation	08/05/2015 1431	JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager

**Sample Analysis Report**

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-001
ClientSample ID: M-020
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 9:08:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1542	DG
Arsenic	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1614	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1614	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1542	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1542	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1614	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1542	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1614	MS
Iron	ND	mg/L		0.05	EPA 200.7	07/13/2015 1542	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1614	MS
Manganese	0.04	mg/L		0.01	EPA 200.7	07/13/2015 1542	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 947	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1614	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1542	DG
Selenium	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1614	MS
Uranium	0.0443	mg/L		0.0003	EPA 200.8	07/09/2015 1614	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1614	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1542	DG
Metals - Total							
Iron	0.53	mg/L		0.05	EPA 200.7	07/13/2015 2143	DG
Manganese	0.04	mg/L		0.01	EPA 200.7	07/13/2015 2143	DG
Radionuclides - Dissolved							
Gross Alpha	73.7	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	4.1	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	22.7	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.0	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	8.3	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.3	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.2	pCi/L		1	Ga-Tech	07/27/2015 2103	MB
Radium 228 Precision (±)	1.2	pCi/L			Ga-Tech	07/27/2015 2103	MB

These results apply only to the samples tested.**RL - Reporting Limit**

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-002
ClientSample ID: M-021
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 9:40:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	204	mg/L		5	SM 2320B	07/10/2015 1730 MRL
Alkalinity, Bicarbonate as HCO ₃	248	mg/L		5	SM 2320B	07/10/2015 1730 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1730 MRL
Chloride	4	mg/L		1	EPA 300.0	07/16/2015 1345 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1730 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1312 AMB
Sulfate	100	mg/L		1	EPA 300.0	07/16/2015 1345 AB
Calcium	72	mg/L		1	EPA 200.7	07/13/2015 1544 DG
Magnesium	17	mg/L		1	EPA 200.7	07/13/2015 1544 DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1544 DG
Sodium	21	mg/L		1	EPA 200.7	07/13/2015 1544 DG
Nitrogen, Ammonia (As N)	0.2	mg/L		0.1	EPA 350.1	07/15/2015 1351 AMB
Silica as SiO ₂	18	mg/L		1	EPA 200.7	07/13/2015 1544 DG

General Parameters

pH	8.2	s.u.		0.1	SM 4500 H B	07/10/2015 1730 MRL
Electrical Conductivity	600	µmhos/cm		5	SM 2510B	07/10/2015 1730 MRL
Total Dissolved Solids (180)	390	mg/L		10	SM 2540	07/10/2015 1328 TS

Data Quality

Cation Sum	6.15	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Anion Sum	6.28	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Cation-Anion Balance (± 5%)	1.09	%		0.01	SM 1030E	07/17/2015 1042 BC
Solids, Total Dissolved (Calc)	360	mg/L		10	SM 1030E	07/17/2015 1042 BC
Calculated TDS/TDS Ratio (0.80-1.20)	1.08	dec. %		0.01	Calculation	08/05/2015 1431 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-002
ClientSample ID: M-021
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 9:40:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1544	DG
Arsenic	0.001	mg/L		0.001	EPA 200.8	07/09/2015 1620	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1620	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1544	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1544	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1620	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1544	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1620	MS
Iron	ND	mg/L		0.05	EPA 200.7	07/13/2015 1544	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1620	MS
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 1544	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 948	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1620	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1544	DG
Selenium	0.003	mg/L		0.001	EPA 200.8	07/09/2015 1620	MS
Uranium	0.0570	mg/L		0.0003	EPA 200.8	07/09/2015 1620	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1620	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1544	DG
Metals - Total							
Iron	0.68	mg/L		0.05	EPA 200.7	07/13/2015 2145	DG
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 2145	DG
Radionuclides - Dissolved							
Gross Alpha	115	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	4.9	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	42.1	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	2.4	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	65.2	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	1.0	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	ND	pCi/L		1	Ga-Tech	07/28/2015 004	MB
Radium 228 Precision (±)	NA	pCi/L			Ga-Tech	07/28/2015 004	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-003
ClientSample ID: M-022
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 10:08:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	202	mg/L		5	SM 2320B	07/10/2015 1743 MRL
Alkalinity, Bicarbonate as HCO ₃	247	mg/L		5	SM 2320B	07/10/2015 1743 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1743 MRL
Chloride	4	mg/L		1	EPA 300.0	07/16/2015 1358 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1743 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1323 AMB
Sulfate	104	mg/L		1	EPA 300.0	07/16/2015 1358 AB
Calcium	73	mg/L		1	EPA 200.7	07/13/2015 1553 DG
Magnesium	18	mg/L		1	EPA 200.7	07/13/2015 1553 DG
Potassium	8	mg/L		1	EPA 200.7	07/13/2015 1553 DG
Sodium	22	mg/L		1	EPA 200.7	07/13/2015 1553 DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	07/15/2015 1353 AMB
Silica as SiO ₂	17	mg/L		1	EPA 200.7	07/13/2015 1553 DG

General Parameters

pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1743 MRL
Electrical Conductivity	613	µmhos/cm		5	SM 2510B	07/10/2015 1743 MRL
Total Dissolved Solids (180)	400	mg/L		10	SM 2540	07/10/2015 1329 TS

Data Quality

Cation Sum	6.28	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Anion Sum	6.33	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Cation-Anion Balance (± 5%)	0.41	%		0.01	SM 1030E	07/17/2015 1042 BC
Solids, Total Dissolved (Calc)	370	mg/L		10	SM 1030E	07/17/2015 1042 BC
Calculated TDS/TDS Ratio (0.80-1.20)	1.08	dec. %		0.01	Calculation	08/05/2015 1431 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-003
ClientSample ID: M-022
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 10:08:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1553	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1625	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1625	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1553	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1553	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1625	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1553	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1625	MS
Iron	0.15	mg/L		0.05	EPA 200.7	07/13/2015 1553	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1625	MS
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 1553	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 950	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1625	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1553	DG
Selenium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1625	MS
Uranium	0.0285	mg/L		0.0003	EPA 200.8	07/09/2015 1625	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1625	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1553	DG
Metals - Total							
Iron	0.17	mg/L		0.05	EPA 200.7	07/13/2015 2148	DG
Manganese	0.03	mg/L		0.01	EPA 200.7	07/13/2015 2148	DG
Radionuclides - Dissolved							
Gross Alpha	394	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	9.9	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	129	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	4.1	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	400	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	2.4	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.8	pCi/L		1	Ga-Tech	07/28/2015 305	MB
Radium 228 Precision (±)	2.0	pCi/L			Ga-Tech	07/28/2015 305	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by:

Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-004
ClientSample ID: M-023
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 10:48:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO ₃)	195	mg/L		5	SM 2320B	07/10/2015 1755	MRL
Alkalinity, Bicarbonate as HCO ₃	237	mg/L		5	SM 2320B	07/10/2015 1755	MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1755	MRL
Chloride	2	mg/L		1	EPA 300.0	07/16/2015 1412	AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1755	MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1324	AMB
Sulfate	104	mg/L		1	EPA 300.0	07/16/2015 1412	AB
Calcium	68	mg/L		1	EPA 200.7	07/13/2015 1555	DG
Magnesium	16	mg/L		1	EPA 200.7	07/13/2015 1555	DG
Potassium	9	mg/L		1	EPA 200.7	07/13/2015 1555	DG
Sodium	24	mg/L		1	EPA 200.7	07/13/2015 1555	DG
Nitrogen, Ammonia (As N)	0.1	mg/L		0.1	EPA 350.1	07/15/2015 1354	AMB
Silica as SiO ₂	14	mg/L		1	EPA 200.7	07/13/2015 1555	DG
General Parameters							
pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1755	MRL
Electrical Conductivity	590	µmhos/cm		5	SM 2510B	07/10/2015 1755	MRL
Total Dissolved Solids (180)	380	mg/L		10	SM 2540	07/10/2015 1330	TS
Data Quality							
Cation Sum	5.99	meq/L		0.01	SM 1030E	07/17/2015 1042	BC
Anion Sum	6.14	meq/L		0.01	SM 1030E	07/17/2015 1042	BC
Cation-Anion Balance (± 5%)	1.19	%		0.01	SM 1030E	07/17/2015 1042	BC
Solids, Total Dissolved (Calc)	350	mg/L		10	SM 1030E	07/17/2015 1042	BC
Calculated TDS/TDS Ratio (0.80-1.20)	1.09	dec. %		0.01	Calculation	08/05/2015 1431	JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-004
ClientSample ID: M-023
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 10:48:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1555	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1631	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1631	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1555	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1555	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1631	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1555	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1631	MS
Iron	ND	mg/L		0.05	EPA 200.7	07/13/2015 1555	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1631	MS
Manganese	0.04	mg/L		0.01	EPA 200.7	07/13/2015 1555	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1000	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1631	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1555	DG
Selenium	0.007	mg/L		0.001	EPA 200.8	07/09/2015 1631	MS
Uranium	0.0014	mg/L		0.0003	EPA 200.8	07/09/2015 1631	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1631	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1555	DG
Metals - Total							
Iron	0.21	mg/L		0.05	EPA 200.7	07/13/2015 2150	DG
Manganese	0.04	mg/L		0.01	EPA 200.7	07/13/2015 2150	DG
Radionuclides - Dissolved							
Gross Alpha	3.0	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	1.1	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	8.6	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	1.7	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	1.5	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.1	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	2.0	pCi/L		1	Ga-Tech	07/28/2015 606	MB
Radium 228 Precision (±)	1.1	pCi/L			Ga-Tech	07/28/2015 606	MB

These results apply only to the samples tested.

RL - Reporting Limit

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M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-005
ClientSample ID: M-024
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 11:27:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Anions/Cations

Alkalinity, Total (As CaCO ₃)	191	mg/L		5	SM 2320B	07/10/2015 1807 MRL
Alkalinity, Bicarbonate as HCO ₃	234	mg/L		5	SM 2320B	07/10/2015 1807 MRL
Alkalinity, Carbonate as CO ₃	ND	mg/L		5	SM 2320B	07/10/2015 1807 MRL
Chloride	3	mg/L		1	EPA 300.0	07/16/2015 1534 AB
Fluoride	0.3	mg/L		0.1	SM 4500FC	07/10/2015 1807 MRL
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/13/2015 1326 AMB
Sulfate	106	mg/L		1	EPA 300.0	07/16/2015 1534 AB
Calcium	69	mg/L		1	EPA 200.7	07/13/2015 1558 DG
Magnesium	17	mg/L		1	EPA 200.7	07/13/2015 1558 DG
Potassium	9	mg/L		1	EPA 200.7	07/13/2015 1558 DG
Sodium	23	mg/L		1	EPA 200.7	07/13/2015 1558 DG
Nitrogen, Ammonia (As N)	0.1	mg/L		0.1	EPA 350.1	07/15/2015 1355 AMB
Silica as SiO ₂	15	mg/L		1	EPA 200.7	07/13/2015 1558 DG

General Parameters

pH	8.3	s.u.		0.1	SM 4500 H B	07/10/2015 1807 MRL
Electrical Conductivity	581	µmhos/cm		5	SM 2510B	07/10/2015 1807 MRL
Total Dissolved Solids (180)	380	mg/L		10	SM 2540	07/10/2015 1331 TS

Data Quality

Cation Sum	6.03	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Anion Sum	6.12	meq/L		0.01	SM 1030E	07/17/2015 1042 BC
Cation-Anion Balance (± 5%)	0.73	%		0.01	SM 1030E	07/17/2015 1042 BC
Solids, Total Dissolved (Calc)	360	mg/L		10	SM 1030E	07/17/2015 1042 BC
Calculated TDS/TDS Ratio (0.80-1.20)	1.06	dec. %		0.01	Calculation	08/05/2015 1431 JJ

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager



Sample Analysis Report

Company: Power Resources (Cameco)
PO Box 1210
Glenrock, WY 82637

Date Reported 8/5/2015
Report ID S1507157001

ProjectName: MU1 Up-gradient Monitor Ring
Lab ID: S1507157-005
ClientSample ID: M-024
COC: 157165

WorkOrder: S1507157
CollectionDate: 7/8/2015 11:27:00 AM
DateReceived: 7/9/2015 1:20:00 PM
FieldSampler: KA
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Metals - Dissolved							
Aluminum	ND	mg/L		0.1	EPA 200.7	07/13/2015 1558	DG
Arsenic	ND	mg/L		0.001	EPA 200.8	07/09/2015 1703	MS
Barium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1703	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	07/13/2015 1558	DG
Boron	ND	mg/L		0.1	EPA 200.7	07/13/2015 1558	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	07/09/2015 1703	MS
Chromium	ND	mg/L		0.01	EPA 200.7	07/13/2015 1558	DG
Copper	ND	mg/L		0.01	EPA 200.8	07/09/2015 1703	MS
Iron	0.21	mg/L		0.05	EPA 200.7	07/13/2015 1558	DG
Lead	ND	mg/L		0.01	EPA 200.8	07/09/2015 1703	MS
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 1558	DG
Mercury	ND	mg/L		0.001	EPA 245.1	07/14/2015 1008	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	07/09/2015 1703	MS
Nickel	ND	mg/L		0.05	EPA 200.7	07/13/2015 1558	DG
Selenium	0.006	mg/L		0.001	EPA 200.8	07/09/2015 1703	MS
Uranium	0.0067	mg/L		0.0003	EPA 200.8	07/09/2015 1703	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	07/09/2015 1703	MS
Zinc	ND	mg/L		0.01	EPA 200.7	07/13/2015 1558	DG
Metals - Total							
Iron	0.76	mg/L		0.05	EPA 200.7	07/13/2015 2152	DG
Manganese	0.02	mg/L		0.01	EPA 200.7	07/13/2015 2152	DG
Radionuclides - Dissolved							
Gross Alpha	6.1	pCi/L		2	SM 7110B	07/21/2015 1532	MB
Gross Alpha Precision (±)	1.4	pCi/L			SM 7110B	07/21/2015 1532	MB
Gross Beta	11.3	pCi/L		3	SM 7110B	07/21/2015 1532	MB
Gross Beta Precision (±)	1.8	pCi/L			SM 7110B	07/21/2015 1532	MB
Radium 226	2.0	pCi/L		0.2	SM 7500 Ra-B	07/28/2015 918	MB
Radium 226 Precision (±)	0.2	pCi/L			SM 7500 Ra-B	07/28/2015 918	MB
Radium 228	1.7	pCi/L		1	Ga-Tech	07/28/2015 907	MB
Radium 228 Precision (±)	1.2	pCi/L			Ga-Tech	07/28/2015 907	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
X Matrix Effect

C Calculated Value
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

Reviewed by: Tom Patten
Tom Patten, Laboratory Manager

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

AlkalinitySample Type **MBLK**

Units: mg/L

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	ND	5						

AlkalinitySample Type **LCS**

Units: mg/L

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Alkalinity, Total (As CaCO3)	602	5	595		101	90 - 110		

AlkalinitySample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Alkalinity, Bicarbonate as HCO3	243	5	229	5.89		20		
Alkalinity, Carbonate as CO3	ND	5	ND			20		
Alkalinity, Total (As CaCO3)	199	5	188	5.89		20		

ConductivitySample Type **MBLK**

Units: µmhos/cm

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	ND	5						

ConductivitySample Type **LCS**

Units: µmhos/cm

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Electrical Conductivity	1070	5	1060		101	90 - 110		

ConductivitySample Type **DUP**

Units: µmhos/cm

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Electrical Conductivity	571	5	570	0.175		20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Dissolved Mercury by EPA 245.1 - WaterSample Type **MBLK**

Units: mg/L

LRB (07/14/15 12:23)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	ND	0.001						

Dissolved Mercury by EPA 245.1 - WaterSample Type **LCS**

Units: mg/L

LCS (07/14/15 12:21)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	0.002	0.001	0.002		91.0	85 - 115		

Dissolved Mercury by EPA 245.1 - WaterSample Type **MS**

Units: mg/L

S1507157-004D (07/14/15 10:04)	RunNo: 123576							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Mercury	0.002	0.001	0.00197	ND	97.1	70 - 130		

Dissolved Mercury by EPA 245.1 - WaterSample Type **MSD**

Units: mg/L

S1507157-004D (07/14/15 10:06)	RunNo: 123576							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Mercury	0.002	0.001	0.002	4.13	93.2	20		

Dissolved Mercury by EPA 245.1 - WaterSample Type **DUP**

Units: mg/L

S1507157-004D (07/14/15 10:02)	RunNo: 123576							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Mercury	ND	0.001	ND			20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	ND	0.1					
Beryllium	ND	0.01					
Boron	ND	0.1					
Chromium	ND	0.01					
Iron	ND	0.05					
Manganese	ND	0.02					
Nickel	ND	0.01					
Zinc	ND	0.01					

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **LCS**

Units: mg/L

DISS LCS Q (07/13/15 12:39)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	1.0	0.1	1		95.3	85 - 115	
Beryllium	1.01	0.01	1		101	85 - 115	
Boron	1.0	0.1	1		98.3	85 - 115	
Chromium	0.99	0.01	1		99.3	85 - 115	
Iron	0.98	0.05	1		98.0	85 - 115	
Manganese	1.02	0.02	1		102	85 - 115	
Nickel	1.01	0.01	1		101	85 - 115	
Zinc	0.98	0.01	1		98.4	85 - 115	

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MS**

Units: mg/L

S1507158-004DS (07/13/15 16:11)		RunNo: 123548					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Aluminum	0.3	0.1	0.25	ND	113	70 - 130	
Beryllium	0.316	0.001	0.25	ND	127	70 - 130	
Boron	0.4	0.1	0.25	ND	122	70 - 130	
Chromium	0.30	0.01	0.25	ND	122	70 - 130	
Iron	0.56	0.05	0.25	0.27	113	70 - 130	
Manganese	0.32	0.01	0.25	0.03	119	70 - 130	
Nickel	0.30	0.05	0.25	ND	119	70 - 130	
Zinc	0.30	0.01	0.25	ND	121	70 - 130	

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **MSD**

Units: mg/L

S1507166-003DSD (07/13/15 16:42)		RunNo: 123548					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Aluminum	0.28	0.02	0.27	6.22	110	20	
Beryllium	0.306	0.002	0.288	5.90	122	20	
Boron	0.39	0.03	0.38	4.12	117	20	
Chromium	0.30	0.01	0.28	6.52	118	20	
Iron	0.32	0.02	0.31	4.16	116	20	
Manganese	0.30	0.01	0.28	5.89	116	20	
Nickel	0.29	0.01	0.27	5.27	116	20	
Zinc	0.30	0.01	0.28	6.82	119	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Dissolved Metals by ICP - EPA 200.7 - WaterSample Type **DUP**

Units: mg/L

S1507158-003DD (07/13/15 16:07)		RunNo: 123548					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Aluminum	ND	0.1	ND			20	
Beryllium	ND	0.001	ND			20	
Boron	ND	0.1	ND			20	
Chromium	ND	0.01	ND			20	
Iron	0.13	0.05	0.14	4.06		20	
Manganese	0.02	0.01	0.02	4.08		20	
Nickel	ND	0.05	ND			20	
Zinc	ND	0.01	ND			20	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MBLK**

Units: mg/L

MBLK (07/09/15 13:47)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	ND	0.005					
Barium	ND	0.1					
Cadmium	ND	0.001					
Copper	ND	0.01					
Lead	ND	0.02					
Molybdenum	ND	0.02					
Selenium	ND	0.001					
Uranium	ND	0.0003					
Vanadium	ND	0.02					

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **LCS**

Units: mg/L

LCS (07/09/15 13:41)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	0.104	0.005	0.1		104	85 - 115	
Barium	0.1	0.1	0.1		101	85 - 115	
Cadmium	0.100	0.001	0.1		99.5	85 - 115	
Copper	0.10	0.01	0.1		104	85 - 115	
Lead	0.10	0.02	0.1		101	85 - 115	
Molybdenum	0.10	0.02	0.1		97.1	85 - 115	
Selenium	0.101	0.001	0.1		101	85 - 115	
Uranium	0.102	0.0003	0.1		102	85 - 115	
Vanadium	0.10	0.02	0.1		102	85 - 115	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MS**

Units: mg/L

S1507157-004DS (07/09/15 16:42)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	1.10	0.001	1.1	ND	100	70 - 130	
Barium	1.1	0.1	1.1	ND	99.4	70 - 130	
Cadmium	1.11	0.001	1.1	ND	101	70 - 130	
Copper	1.10	0.01	1.1	ND	100	70 - 130	
Lead	1.11	0.01	1.1	ND	101	70 - 130	

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MS**

Units: mg/L

S1507157-004DS (07/09/15 16:42)		RunNo: 123411					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Molybdenum	1.08	0.01	1.1	ND	97.9	70 - 130	
Selenium	1.06	0.001	1.1	0.007	95.7	70 - 130	
Uranium	1.12	0.0003	1.1	0.0014	101	70 - 130	
Vanadium	1.1	0.1	1.1	ND	102	70 - 130	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **MSD**

Units: mg/L

S1507157-004DMSD (07/09/15 16:47)		RunNo: 123411					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	1.12	0.001	1.10	1.19	101	20	
Barium	1.1	0.1	1.1	2.30	102	20	
Cadmium	1.12	0.001	1.11	0.931	102	20	
Copper	1.13	0.01	1.10	1.98	102	20	
Lead	1.15	0.01	1.11	3.19	104	20	
Molybdenum	1.14	0.01	1.08	5.37	103	20	
Selenium	1.07	0.001	1.06	1.03	96.7	20	
Uranium	1.16	0.0003	1.12	4.04	106	20	
Vanadium	1.1	0.1	1.1	0.340	102	20	

Dissolved Metals by ICPMS EPA 200.8 - WaterSample Type **DUP**

Units: mg/L

S1507157-004DD (07/09/15 16:36)		RunNo: 123411					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Arsenic	ND	0.001	ND			20	
Barium	ND	0.1	ND			20	
Cadmium	ND	0.001	ND			20	
Copper	ND	0.01	ND			20	
Lead	ND	0.01	ND			20	
Molybdenum	ND	0.01	ND			20	
Selenium	0.006	0.001	0.007	7.05		20	
Uranium	0.0014	0.0003	0.0014	0.587		20	
Vanadium	ND	0.1	ND			20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Fluoride by SM 4500Sample Type **MBLK**

Units: mg/L

BLANK (07/10/15 15:29)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	ND	0.1						

Fluoride by SM 4500Sample Type **LCS**

Units: mg/L

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	3.1	0.1	3		103	85 - 115		

Fluoride by SM 4500Sample Type **MS**

Units: mg/L

S1507166-006A (07/10/15 21:24)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Fluoride	3.3	0.1	2.5	0.5	110	80 - 120		

Fluoride by SM 4500Sample Type **MSD**

Units: mg/L

S1507166-006A (07/10/15 21:28)	RunNo: 123475							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Fluoride	3.2	0.1	3.3	0.471	109	20		

Fluoride by SM 4500Sample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Fluoride	0.3	0.1	0.3	2.17		20		

Gross Alpha, Beta by SM 7110BSample Type **MBLK**

Units: pCi/L

MB-335 (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	ND	2						
Gross Beta (Dissolved)	ND	3						

Gross Alpha, Beta by SM 7110BSample Type **LCS**

Units: pCi/L

LCS-335 (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	79	2	72.6		109	59.5 - 130		
Gross Beta (Dissolved)	133	3	118		113	80 - 122		

Gross Alpha, Beta by SM 7110BSample Type **MS**

Units: pCi/L

S1507158-007F MS (07/21/15 21:35)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Gross Alpha (Dissolved)	98	2	72.6	34	89.4	50 - 150		
Gross Beta (Dissolved)	155	3	118	16	118	61.4 - 150		

Gross Alpha, Beta by SM 7110BSample Type **DUP**

Units: pCi/L

S1507157-002F DUP (07/21/15 15:32)	RunNo: 123941	PrepDate: 07/15/15 0:00	BatchID R123941					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Gross Alpha (Dissolved)	95	2	115	18.9		20		
Gross Beta (Dissolved)	41	3	42	3.86		20		

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Anions by ION ChromatographySample Type **MBLK**

Units: mg/L

BLK (07/16/15 11:56)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	ND	1					
Sulfate	ND	1					

Anions by ION ChromatographySample Type **LCS**

Units: mg/L

DIONEX (07/16/15 11:02)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	30	1	30		98.6	90 - 110	
Sulfate	142	1	150		94.6	90 - 110	

Anions by ION ChromatographySample Type **MS**

Units: mg/L

S1507157-004ASPK (07/16/15 14:39)		RunNo: 123728					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	57	1	54.5	2	100	80 - 120	
Sulfate	529	1	409	104	104	80 - 120	

Anions by ION ChromatographySample Type **MSD**

Units: mg/L

S1507157-004ASPK (07/16/15 14:53)		RunNo: 123728					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Chloride	57	1	57	0.115	100	20	
Sulfate	530	1	529	0.178	104	20	

Anions by ION ChromatographySample Type **DUP**

Units: mg/L

S1507157-004A (07/16/15 14:26)		RunNo: 123728					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Chloride	2	1	2	0.0963		20	
Sulfate	104	1	104	0.106		20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Cations by ICP (Method 200.7)Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)		RunNo: 123540					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	ND	1					
Magnesium	ND	1					
Potassium	ND	1					
Sodium	ND	1					

Cations by ICP (Method 200.7)Sample Type **LCS**

Units: mg/L

CAT LCS IML3 (07/13/15 12:41)		RunNo: 123540					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	38	1	40		95.2	85 - 115	
Magnesium	41	1	40		102	85 - 115	
Potassium	38	1	40		95.3	85 - 115	
Sodium	39	1	40		97.2	85 - 115	

Cations by ICP (Method 200.7)Sample Type **MS**

Units: mg/L

S1507158-004AS (07/13/15 16:11)		RunNo: 123540					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Calcium	96	1	25	71	102	70 - 130	
Magnesium	46	1	25	17	115	70 - 130	
Potassium	39	1	25	8	124	70 - 130	
Sodium	50	1	25	21	117	70 - 130	

Cations by ICP (Method 200.7)Sample Type **MSD**

Units: mg/L

S1507166-003ASD (07/13/15 16:42)		RunNo: 123540					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Calcium	64	1	63	2.01	107	20	
Magnesium	48	1	47	2.04	109	20	
Potassium	36	1	34	4.28	120	20	
Sodium	50	1	48	4.31	103	20	

Cations by ICP (Method 200.7)Sample Type **DUP**

Units: mg/L

S1507158-003AD (07/13/15 16:07)		RunNo: 123540					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Calcium	69	1	73	4.66		20	
Magnesium	17	1	18	4.94		20	
Potassium	8	1	8	4.06		20	
Sodium	20	1	21	2.04		20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Nitrogen, Ammonia (as N)Sample Type **MBLK**

Units: mg/L

BLANK (07/15/15 12:34)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	ND	0.1						

Nitrogen, Ammonia (as N)Sample Type **LCS**

Units: mg/L

QC (07/15/15 12:37)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	2.5	0.1	2.5		101	89 - 111		

Nitrogen, Ammonia (as N)Sample Type **MS**

Units: mg/L

S1507239-005B (07/15/15 13:39)	RunNo: 123650							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Nitrogen, Ammonia (As N)	4.1	0.1	2.5	1.5	103	90 - 110		

Nitrogen, Ammonia (as N)Sample Type **MSD**

Units: mg/L

S1507239-005B (07/15/15 13:41)	RunNo: 123650							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	4.0	0.1	4.1	0.670	102	20		

Nitrogen, Ammonia (as N)Sample Type **DUP**

Units: mg/L

S1507174-004C (07/15/15 12:55)	RunNo: 123650							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Nitrogen, Ammonia (As N)	2.0	0.1	1.9	3.39		20		

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
L	Analyzed by another laboratory
O	Outside the Range of Dilutions
S	Spike Recovery outside accepted recovery limits

E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
X	Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Nitrogen, Nitrate-Nitrite (as N)		Sample Type		MBLK		Units: mg/L			
BLANK (07/13/15 09:35)		RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual		
Nitrogen, Nitrate-Nitrite (as N)		ND	0.1						
Nitrogen, Nitrate-Nitrite (as N)		Sample Type	LCS		Units: mg/L				
QC (07/13/15 09:38)		RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual		
Nitrogen, Nitrate-Nitrite (as N)		18.5	0.1	17.7	105	90 - 110			
Nitrogen, Nitrate-Nitrite (as N)		Sample Type	MS		Units: mg/L				
S1507157-002C (07/13/15 13:15)		RunNo: 123512							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual		
Nitrogen, Nitrate-Nitrite (as N)		2.5	0.1	2.5	ND	98.3	90 - 110		
Nitrogen, Nitrate-Nitrite (as N)		Sample Type	MSD		Units: mg/L				
S1507157-002C (07/13/15 13:17)		RunNo: 123512							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual		
Nitrogen, Nitrate-Nitrite (as N)		2.4	0.1	2.5	1.15	97.2	20		
Nitrogen, Nitrate-Nitrite (as N)		Sample Type	DUP		Units: mg/L				
S1507157-002C (07/13/15 13:13)		RunNo: 123512							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual		
Nitrogen, Nitrate-Nitrite (as N)		ND	0.1	ND		20			
Radium 228 by Ga/Tech		Sample Type	MBLK		Units: pCi/L				
MB-10537 (07/26/15 11:53)		RunNo: 124307		PrepDate: 07/15/15 12:00		BatchID 10537			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual		
Radium 228 (Dissolved)		ND	1						
Radium 228 by Ga/Tech		Sample Type	LCS		Units: pCi/L				
LCS-10537 (07/26/15 14:54)		RunNo: 124307		PrepDate: 07/15/15 12:00		BatchID 10537			
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual		
Radium 228 (Dissolved)		38	1	39.2	97.4	60 - 120			
Radium 228 by Ga/Tech		Sample Type	MSD		Units: pCi/L				
MS-10537 (07/26/15 23:57)		RunNo: 124307		PrepDate: 07/15/15 12:00		BatchID 10537			
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual		
Radium 228 (Dissolved)		36	1	ND	91.1				
Total Radium 228		36	1	ND	91.1				

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Radium 226 in Water - DissolvedSample Type **MBLK**

Units: pCi/L

MB-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

ND

0.2

Radium 226 in Water - DissolvedSample Type **LCS**

Units: pCi/L

LCS-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

4.6

0.2

5.03

92.3

67.6 - 120

Radium 226 in Water - DissolvedSample Type **MS**

Units: pCi/L

MS-1488 (07/28/15 09:17)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 (Dissolved)

4.6

0.2

5.03

ND

91.4

69.4 - 120

Radium 226 in Water - DissolvedSample Type **MSD**

Units: pCi/L

MSD-1488 (07/28/15 09:18)	RunNo: 124298	PrepDate: 07/20/15 0:00	BatchID 10534					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	

Radium 226 (Dissolved)

4.7

0.2

4.6

2.27

93.5

20

Silica as SiO2Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (07/13/15 12:37)	RunNo: 123550							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Silica as SiO2

ND

0.1

Silica as SiO2Sample Type **LCS**

Units: mg/L

DISS LCS Q (07/13/15 12:39)	RunNo: 123550							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Silica as SiO2

2.1

0.1

2.14

98.7

85 - 115

Silica as SiO2Sample Type **MS**

Units: mg/L

S1507158-004DS (07/13/15 16:11)	RunNo: 123550							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Silica as SiO2

16

1

0

17

0

80 - 120

Silica as SiO2Sample Type **MSD**

Units: mg/L

S1507158-004DSD (07/13/15 16:13)	RunNo: 123550							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	

Silica as SiO2

16

1

16

1.81

20

Silica as SiO2Sample Type **DUP**

Units: mg/L

S1507158-003DD (07/13/15 16:07)	RunNo: 123550							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Silica as SiO2

17

1

18

4.45

20

Qualifiers:

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- L Analyzed by another laboratory
- O Outside the Range of Dilutions
- S Spike Recovery outside accepted recovery limits

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

Solids By SM 2540Sample Type **MBLK**

Units: mg/L

DI (07/10/15 13:25)	RunNo: 123604							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Total Dissolved Solids (180)	ND	10						

Solids By SM 2540Sample Type **LCS**

Units: mg/L

CONTROL (07/10/15 13:26)	RunNo: 123604							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Total Dissolved Solids (180)	220	10	226		98.2	90 - 110		

Solids By SM 2540Sample Type **DUP**

Units: mg/L

S1507158-005A (07/10/15 13:37)	RunNo: 123604							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Total Dissolved Solids (180)	370	10	360	0.548		20		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MBLK**

Units: mg/L

MB-10434 (07/13/15 21:57)	RunNo: 123559	PrepDate: 07/10/15 13:07	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	ND	0.05						
Manganese	ND	0.02						

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **LCS**

Units: mg/L

LCS-10434 (07/13/15 20:39)	RunNo: 123559	PrepDate: 07/10/15 13:07	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	0.47	0.05	0.5		93.5	85 - 115		
Manganese	0.19	0.02	0.2		93.9	85 - 115		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MS**

Units: mg/L

S1507158-002ES (07/13/15 22:15)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Iron	0.81	0.05	0.5	0.33	96.5	70 - 130		
Manganese	0.21	0.01	0.2	0.02	92.4	70 - 130		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **MSD**

Units: mg/L

S1507158-002EMSD (07/13/15 22:18)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Iron	0.78	0.05	0.81	4.30	89.7	20		
Manganese	0.21	0.01	0.21	1.01	91.3	20		

Total (200.2) Metals by EPA 200.7 ICP - WaterSample Type **DUP**

Units: mg/L

S1507158-001ED (07/13/15 22:11)	RunNo: 123559	PrepDate: 07/10/15 7:20	BatchID 10434					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
Iron	0.42	0.05	0.43	1.52		20		
Manganese	0.02	0.01	0.02	1.26		20		

Qualifiers:

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
L Analyzed by another laboratory
O Outside the Range of Dilutions
S Spike Recovery outside accepted recovery limits

E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
X Matrix Effect

**ANALYTICAL QC SUMMARY REPORT**

CLIENT: Power Resources (Cameco)
Work Order: S1507157
Project: MU1 Up-gradient Monitor Ring

Date: 8/5/2015
Report ID: S1507157001

pH WaterSample Type **LCS**

Units: s.u.

ATQC (07/10/15 15:18)	RunNo: 123475							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
pH	8.7	0.1	8.6		101	90 - 110		

pH WaterSample Type **DUP**

Units: s.u.

S1507158-005A (07/10/15 19:23)	RunNo: 123475							
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
pH	8.3	0.1	8.3	0.0189		20		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by another laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	X	Matrix Effect