



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 1 of 1

All shaded fields must be completed.
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157164

Client Name cameco Resources	Project Identification Mine Unit # 1 stability monitoring	Sampler (Signature/Attestation of Authenticity) <i>Gwen Trammell</i>	Telephone #
Report Address P.O. Box 1210	Contact Name Larry Wilbanks	ANALYSES / PARAMETERS	
Invoice Address Glenrock, WY 82637	Email LarryWilbanks@cameco.com	New guideline	
	Phone 307-358-6541 X 427		
	Purchase Order # 4500458898		

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	REMARKS	
1	515010376-01	6-16-15	11:30	B-010	WT	7	preserved in field	
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
3.2	<i>Gwen Trammell</i> / Gwen Trammell	6-16-15	12:15	<i>Ken Garowite</i> / Ken Garowite	6/16/15	11:30
	<i>Ken Garowite</i> / Ken Garowite	6/16/15	1647	<i>Nicole Garzaka</i> / Nicole Garzaka	6/17/15	10:27

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



Date: 7/17/2015

CLIENT: Power Resources (Cameco)
Project: Mine Unit #1 Stability Monitoring
Lab Order: S1506376

CASE NARRATIVE
Report ID: S1506376001

Sample B-010 was received on June 17, 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

S1506278-005 - Nitrogen, Ammonia (as N)/Nitrogen, Ammonia (As N) - Spike Recovery outside accepted recovery limits

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

Date Reported 7/17/2015
Report ID S1506376001

ProjectName: Mine Unit #1 Stability Monitoring
Lab ID: S1506376-001
ClientSample ID: B-010
COC: 157164

WorkOrder: S1506376
CollectionDate: 6/16/2015 11:30:00 AM
DateReceived: 6/17/2015 10:27:00 AM
FieldSampler: GT
Matrix: Water

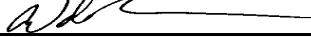
Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO3)	309	mg/L		5	SM 2320B	06/18/2015 009	LJK
Alkalinity, Bicarbonate as HCO3	377	mg/L		5	SM 2320B	06/18/2015 009	LJK
Alkalinity, Carbonate as CO3	ND	mg/L		5	SM 2320B	06/18/2015 009	LJK
Chloride	32	mg/L		1	EPA 300.0	06/24/2015 2314	AB
Fluoride	0.1	mg/L		0.1	SM 4500FC	06/18/2015 009	LJK
Nitrogen, Nitrate+Nitrite (as N)	ND	mg/L		0.1	EPA 353.2	07/01/2015 1310	AMB
Sulfate	179	mg/L		1	EPA 300.0	06/24/2015 2314	AB
Calcium	133	mg/L		1	EPA 200.7	06/18/2015 1629	DG
Magnesium	32	mg/L		1	EPA 200.7	06/18/2015 1629	DG
Potassium	13	mg/L		1	EPA 200.7	06/18/2015 1629	DG
Sodium	23	mg/L		1	EPA 200.7	06/18/2015 1629	DG
Nitrogen, Ammonia (As N)	ND	mg/L		0.1	EPA 350.1	06/19/2015 1713	AMB
Silica as SiO2	15	mg/L		1	EPA 200.7	06/18/2015 1629	DG
General Parameters							
pH	7.8	s.u.		0.1	SM 4500 H B	06/18/2015 009	LJK
Electrical Conductivity	987	µmhos/cm		5	SM 2510B	06/18/2015 009	LJK
Total Dissolved Solids (180)	710	mg/L		10	SM 2540	06/17/2015 1505	TS
Data Quality							
Cation Sum	10.62	meq/L		0.01	SM 1030E	07/07/2015 1605	JJ
Anion Sum	10.81	meq/L		0.01	SM 1030E	07/07/2015 1605	JJ
Cation-Anion Balance (± 5%)	0.91	%		0.01	SM 1030E	07/07/2015 1605	JJ
Solids, Total Dissolved (Calc)	610	mg/L		10	SM 1030E	07/07/2015 1605	JJ
Calculated TDS/TDS Ratio (0.80-1.20)	1.16	dec. %		0.01	Calculation	07/08/2015 1210	WN

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 a contract 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: 
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

Date Reported 7/17/2015
Report ID S1506376001

ProjectName: Mine Unit #1 Stability Monitoring
Lab ID: S1506376-001
ClientSample ID: B-010
COC: 157164

WorkOrder: S1506376
CollectionDate: 6/16/2015 11:30:00 AM
DateReceived: 6/17/2015 10:27:00 AM
FieldSampler: GT
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	06/18/2015 1629	DG
Arsenic	0.003	mg/L		0.001	EPA 200.8	06/17/2015 1907	MS
Barium	ND	mg/L		0.1	EPA 200.8	06/17/2015 1907	MS
Beryllium	ND	mg/L		0.001	EPA 200.7	06/18/2015 1629	DG
Boron	0.1	mg/L		0.1	EPA 200.7	06/18/2015 1629	DG
Cadmium	ND	mg/L		0.001	EPA 200.8	06/17/2015 1907	MS
Chromium	ND	mg/L		0.01	EPA 200.7	06/18/2015 1629	DG
Copper	ND	mg/L		0.01	EPA 200.8	06/17/2015 1907	MS
Iron	0.83	mg/L		0.05	EPA 200.7	06/18/2015 1629	DG
Lead	ND	mg/L		0.01	EPA 200.8	06/17/2015 1907	MS
Manganese	0.14	mg/L		0.01	EPA 200.7	06/18/2015 1629	DG
Mercury	ND	mg/L		0.001	EPA 245.1	06/23/2015 914	AW
Molybdenum	ND	mg/L		0.01	EPA 200.8	06/17/2015 1907	MS
Nickel	ND	mg/L		0.05	EPA 200.7	06/18/2015 1629	DG
Selenium	0.055	mg/L		0.001	EPA 200.8	06/17/2015 1907	MS
Uranium	3.09	mg/L		0.0003	EPA 200.8	06/17/2015 1907	MS
Vanadium	ND	mg/L		0.1	EPA 200.8	06/17/2015 1907	MS
Zinc	ND	mg/L		0.01	EPA 200.7	06/18/2015 1629	DG

Metals - Total

Iron	0.98	mg/L		0.05	EPA 200.7	06/18/2015 1928	DG
Manganese	0.14	mg/L		0.01	EPA 200.7	06/18/2015 1928	DG

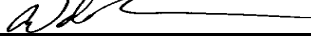
Radionuclides - Dissolved

Gross Alpha	2325	pCi/L		2	SM 7110B	07/13/2015 1942	MB
Gross Alpha Precision (±)	25.9	pCi/L			SM 7110B	07/13/2015 1942	MB
Gross Beta	1179	pCi/L		3	SM 7110B	07/13/2015 1942	MB
Gross Beta Precision (±)	11.3	pCi/L			SM 7110B	07/13/2015 1942	MB
Radium 226	431	pCi/L		0.2	SM 7500 Ra-B	07/13/2015 1422	MB
Radium 226 Precision (±)	2.3	pCi/L			SM 7500 Ra-B	07/13/2015 1422	MB
Radium 228	5.0	pCi/L		1	Ga-Tech	07/13/2015 1618	MB
Radium 228 Precision (±)	2.5	pCi/L			Ga-Tech	07/13/2015 1618	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 a contract 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: 
Wade Nieuwsma, Assistant Laboratory Manager



ANALYTICAL QC SUMMARY REPORT

CLIENT: Power Resources (Cameco)
Work Order: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Alkalinity		Sample Type	MBLK		Units: mg/L				
BLANK (06/17/15 17:09)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Alkalinity, Total (As CaCO3)	122367	ND	5					

Alkalinity		Sample Type	LCS		Units: mg/L				
ATQC (06/17/15 16:59)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Alkalinity, Total (As CaCO3)	122367	617	5	595		104	90 - 110	

Alkalinity		Sample Type	DUP		Units: mg/L				
S1506364-001A (06/17/15 18:49)	Analyte	RunNo:	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
	Alkalinity, Bicarbonate as HCO3	122367	892	5	878	1.57		20	
	Alkalinity, Carbonate as CO3		ND	5	ND			20	
	Alkalinity, Total (As CaCO3)		731	5	720	1.57		20	

Conductivity		Sample Type	MBLK		Units: µmhos/cm				
BLANK (06/17/15 17:09)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Electrical Conductivity	122367	ND	5					

Conductivity		Sample Type	LCS		Units: µmhos/cm				
ATQC (06/17/15 16:59)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Electrical Conductivity	122367	1090	5	1060		103	90 - 110	

Conductivity		Sample Type	DUP		Units: µmhos/cm				
S1506364-001A (06/17/15 18:49)	Analyte	RunNo:	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
	Electrical Conductivity	122367	7400	1	7500	1.34		20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - L Analyzed by a contract 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Dissolved Mercury by EPA 245.1 - Water

Sample Type **MBLK**

Units: mg/L

LRB (06/23/15 09:28)	RunNo: 122627						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Mercury	ND	0.001					

Dissolved Mercury by EPA 245.1 - Water

Sample Type **LCS**

Units: mg/L

LCS (06/23/15 10:24)	RunNo: 122627						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Mercury	0.002	0.001	0.002		94.3	85 - 115	

Dissolved Mercury by EPA 245.1 - Water

Sample Type **MS**

Units: mg/L

S1506371-002C (06/23/15 09:00)	RunNo: 122627						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Mercury	0.002	0.001	0.00197	ND	95.0	70 - 130	

Dissolved Mercury by EPA 245.1 - Water

Sample Type **MSD**

Units: mg/L

S1506371-002C (06/23/15 09:02)	RunNo: 122627						
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Mercury	0.002	0.001	0.002	1.14	96.0	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 a contract 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Dissolved Metals by ICP - EPA 200.7 - Water

Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (06/18/15 12:05)		RunNo: 122429						
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 - Water

Sample Type **LCS**

Units: mg/L

DISS LCS Q (06/18/15 12:07)		RunNo: 122429						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Aluminum	1.0	0.1	1		95.8	85 - 115		
Beryllium	1.00	0.01	1		100	85 - 115		
Boron	1.0	0.1	1		97.6	85 - 115		
Chromium	1.01	0.01	1		101	85 - 115		
Iron	0.98	0.05	1		98.3	85 - 115		
Manganese	1.02	0.02	1		102	85 - 115		
Nickel	1.04	0.01	1		104	85 - 115		
Zinc	0.99	0.01	1		99.3	85 - 115		

Dissolved Metals by ICP - EPA 200.7 - Water

Sample Type **MS**

Units: mg/L

S1506378-005CS (06/18/15 16:44)		RunNo: 122429						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Aluminum	2.7	0.1	2.75	0.1	94.6	70 - 130		
Beryllium	2.84	0.01	2.75	ND	103	70 - 130		
Boron	2.85	0.03	2.75	0.17	97.4	70 - 130		
Chromium	2.76	0.01	2.75	ND	100	70 - 130		
Iron	6.83	0.05	2.75	3.88	107	70 - 130		
Manganese	3.61	0.02	2.75	0.88	99.2	70 - 130		
Nickel	2.87	0.01	2.75	0.03	103	70 - 130		
Zinc	2.78	0.01	2.75	0.04	99.6	70 - 130		

Dissolved Metals by ICP - EPA 200.7 - Water

Sample Type **MSD**

Units: mg/L

S1506378-005CSD (06/18/15 16:47)		RunNo: 122429					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Aluminum	2.9	0.1	2.7	6.79	101	20	
Beryllium	3.01	0.01	2.84	5.93	109	20	
Boron	3.09	0.03	2.85	8.17	106	20	
Chromium	2.97	0.01	2.76	7.13	108	20	
Iron	6.97	0.05	6.83	2.03	112	20	
Manganese	3.82	0.02	3.61	5.73	107	20	
Nickel	3.06	0.01	2.87	6.54	110	20	
Zinc	2.97	0.01	2.78	6.61	106	20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - L Analyzed by a contract 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Dissolved Metals by ICPMS EPA 200.8 - Water

Sample Type **MBLK**

Units: mg/L

MBLK (06/17/15 13:11)		RunNo: 122360						
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 - Water

Sample Type **LCS**

Units: mg/L

LCS (06/17/15 13:05)		RunNo: 122360						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Arsenic	0.101	0.005	0.1		101	85 - 115		
Barium	0.1	0.1	0.1		105	85 - 115		
Cadmium	0.099	0.001	0.1		99.4	85 - 115		
Copper	0.10	0.01	0.1		102	85 - 115		
Lead	0.10	0.02	0.1		102	85 - 115		
Molybdenum	0.11	0.02	0.1		105	85 - 115		
Selenium	0.100	0.001	0.1		100	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 - Water

Sample Type **MS**

Units: mg/L

S1506378-003CS (06/17/15 21:19)		RunNo: 122360						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Arsenic	1.07	0.005	1.1	ND	97.4	70 - 130		
Barium	1.1	0.5	1.1	ND	97.4	70 - 130		
Cadmium	1.05	0.002	1.1	ND	95.1	70 - 130		
Copper	1.04	0.01	1.1	ND	93.9	70 - 130		
Lead	1.07	0.02	1.1	ND	97.7	70 - 130		
Molybdenum	1.06	0.02	1.1	ND	96.6	70 - 130		
Selenium	1.05	0.005	1.1	ND	95.6	70 - 130		
Uranium	1.09	0.001	1.1	0.002	98.6	70 - 130		
Vanadium	1.08	0.02	1.1	ND	97.9	70 - 130		

Dissolved Metals by ICPMS EPA 200.8 - Water

Sample Type **MSD**

Units: mg/L

S1506378-003CMSD (06/17/15 21:24)		RunNo: 122360					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	1.09	0.005	1.07	1.70	99.0	20	
Barium	1.1	0.5	1.1	1.24	98.6	20	
Cadmium	1.04	0.002	1.05	0.766	94.4	20	
Copper	1.05	0.01	1.04	1.53	95.4	20	

- Qualifiers:**
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 - O Outside the Range of Dilutions
 - S Spike Recovery outside accepted recovery limits
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
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 - R RPD outside accepted recovery limits
 - X Matrix Effect



ANALYTICAL QC SUMMARY REPORT

CLIENT: Power Resources (Cameco)
Work Order: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Dissolved Metals by ICPMS EPA 200.8 - Water

Sample Type **MSD**

Units: mg/L

S1506378-003CMSD (06/17/15 21:24)		RunNo: 122360					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Lead	1.07	0.02	1.07	0.907	96.8	20	
Molybdenum	1.07	0.02	1.06	0.393	97.0	20	
Selenium	1.08	0.005	1.05	2.23	97.8	20	
Uranium	1.07	0.001	1.09	1.94	96.7	20	
Vanadium	1.09	0.02	1.08	1.36	99.3	20	

Fluoride by SM 4500

Sample Type **MBLK**

Units: mg/L

BLANK (06/17/15 17:09)		RunNo: 122367					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Fluoride	ND	0.1					

Fluoride by SM 4500

Sample Type **LCS**

Units: mg/L

ATQC (06/17/15 16:59)		RunNo: 122367					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Fluoride	2.8	0.1	3		93.4	85 - 115	

Fluoride by SM 4500

Sample Type **MS**

Units: mg/L

S1506369-007A (06/17/15 22:07)		RunNo: 122367					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Fluoride	2.6	0.1	2.5	0.2	95.8	80 - 120	

Fluoride by SM 4500

Sample Type **MSD**

Units: mg/L

S1506369-007A (06/17/15 22:11)		RunNo: 122367					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Fluoride	2.6	0.1	2.6	0.467	96.3	20	

Gross Alpha, Beta by SM 7110B

Sample Type **MBLK**

Units: pCi/L

MB-334 (07/13/15 13:38)		RunNo: 123571		PrepDate: 06/26/15 0:00		BatchID: R123571	
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 7110B

Sample Type **LCS**

Units: pCi/L

LCS-334 (07/13/15 13:38)		RunNo: 123571		PrepDate: 06/26/15 0:00		BatchID: R123571	
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Gross Alpha (Dissolved)	69	2	72.6		94.8	59.5 - 130	
Gross Beta (Dissolved)	132	3	118		112	80 - 122	

Gross Alpha, Beta by SM 7110B

Sample Type **DUP**

Units: pCi/L

S1506441-003F DUP (07/13/15 13:38)		RunNo: 123571		PrepDate: 06/26/15 0:00		BatchID: R123571	
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Gross Alpha (Dissolved)	14	2	16	14.5		20	
Gross Beta (Dissolved)	9	3	8	11.3		20	

Qualifiers: B Analyte detected in the associated Method Blank
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 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Anions by ION Chromatography

Sample Type **MBLK**

Units: mg/L

BLK (06/24/15 06:18)		RunNo: 122731						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Chloride	ND	1						
Sulfate	ND	1						

Anions by ION Chromatography

Sample Type **LCS**

Units: mg/L

DIONEX (06/24/15 06:32)		RunNo: 122731						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Chloride	30	1	30		99.3	90 - 110		
Sulfate	144	1	150		95.8	90 - 110		

Anions by ION Chromatography

Sample Type **MS**

Units: mg/L

S1506184-006ASPK (06/25/15 00:36)		RunNo: 122731						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Chloride	4690	1	4550	152	99.7	80 - 120		
Sulfate	50100	1	34200	15400	102	80 - 120		

Anions by ION Chromatography

Sample Type **MSD**

Units: mg/L

S1506184-006ASPK (06/25/15 00:49)		RunNo: 122731						
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Chloride	4720	1	4690	0.530	100	20		
Sulfate	51600	1	50100	2.94	106	20		

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
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	L Analyzed by a contract 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Cations by ICP (Method 200.7)

Sample Type **MBLK**

Units: mg/L

MBLK DISS/CAT (06/18/15 12:05)		RunNo: 122427						
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 (06/18/15 12:10)		RunNo: 122427						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Calcium	40	1	40		98.7	85 - 115		
Magnesium	41	1	40		102	85 - 115		
Potassium	40	1	40		101	85 - 115		
Sodium	40	1	40		99.1	85 - 115		

Cations by ICP (Method 200.7)

Sample Type **MS**

Units: mg/L

S1506378-005AS (06/18/15 16:44)		RunNo: 122427						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Calcium	770	1	275	459	113	70 - 130		
Magnesium	666	1	275	369	108	70 - 130		
Potassium	324	1	275	12	114	70 - 130		
Sodium	708	1	275	397	113	70 - 130		

Cations by ICP (Method 200.7)

Sample Type **MSD**

Units: mg/L

S1506378-005ASD (06/18/15 16:47)		RunNo: 122427						
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Calcium	787	1	770	2.17	119	20		
Magnesium	686	1	666	2.99	115	20		
Potassium	343	1	324	5.65	121	20		
Sodium	724	1	708	2.21	119	20		

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 - E Value above quantitation range
 - J Analyte detected below quantitation limits
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 - R RPD outside accepted recovery limits
 - X Matrix Effect



ANALYTICAL QC SUMMARY REPORT

CLIENT: Power Resources (Cameco)
Work Order: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Nitrogen, Ammonia (as N)		Sample Type	MBLK		Units: mg/L				
BLANK (06/19/15 15:16)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Ammonia (As N)	122533	ND	0.1					

Nitrogen, Ammonia (as N)		Sample Type	LCS		Units: mg/L				
QC (06/19/15 15:18)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Ammonia (As N)	122533	2.5	0.1	2.5		99.6	89 - 111	

Nitrogen, Ammonia (as N)		Sample Type	MS		Units: mg/L				
S1506278-005C (06/19/15 16:21)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Ammonia (As N)	122533	1.95	0.05	2.5	ND	78.2	90 - 110	S

Nitrogen, Ammonia (as N)		Sample Type	DUP		Units: mg/L				
S1506333-006C (06/19/15 16:41)	Analyte	RunNo:	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
	Nitrogen, Ammonia (As N)	122533	0.2	0.1	0.2	1.42		20	

Nitrogen, Nitrate-Nitrite (as N)		Sample Type	MBLK		Units: mg/L				
BLANK (07/01/15 09:25)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Nitrate-Nitrite (as N)	123054	ND	0.1					

Nitrogen, Nitrate-Nitrite (as N)		Sample Type	LCS		Units: mg/L				
QC (07/01/15 09:28)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Nitrate-Nitrite (as N)	123054	18.5	0.1	17.7		104	90 - 110	

Nitrogen, Nitrate-Nitrite (as N)		Sample Type	MS		Units: mg/L				
S1506558-009B (07/01/15 13:27)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Nitrogen, Nitrate-Nitrite (as N)	123054	2.5	0.1	2.5	ND	97.9	90 - 110	

Nitrogen, Nitrate-Nitrite (as N)		Sample Type	MSD		Units: mg/L				
S1506558-009B (07/01/15 13:28)	Analyte	RunNo:	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Nitrogen, Nitrate-Nitrite (as N)	123054	2.5	0.1	2.5	0.121	97.8	20	

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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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Radium 228 by Ga/Tech		Sample Type	MBLK		Units: pCi/L			
MB-10457 (07/12/15 18:08)	Analyte	RunNo:	123711	PrepDate:	06/23/15 9:00	BatchID:	10457	
		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-10457 (07/12/15 20:09)	Analyte	RunNo:	123711	PrepDate:	06/23/15 9:00	BatchID:	10457	
		Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Radium 228 (Dissolved)	33	1	39.2		84.9	60 - 120	

Radium 228 by Ga/Tech		Sample Type	MS		Units: pCi/L			
MS-10457 (07/13/15 00:11)	Analyte	RunNo:	123711	PrepDate:	06/23/15 9:00	BatchID:	10457	
		Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Radium 228 (Dissolved)	39	1	39.2	ND	98.7	66.7 - 120	

Radium 228 by Ga/Tech		Sample Type	MSD		Units: pCi/L			
MSD-10457 (07/13/15 02:12)	Analyte	RunNo:	123711	PrepDate:	06/23/15 9:00	BatchID:	10457	
		Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Radium 228 (Dissolved)	32	1	39	18.9	81.7	20	

Radium 226 in Water - Dissolved		Sample Type	MBLK		Units: pCi/L			
MB-1476 (07/13/15 14:22)	Analyte	RunNo:	123714	PrepDate:	07/01/15 0:00	BatchID:	10458	
		Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	ND	0.2					

Radium 226 in Water - Dissolved		Sample Type	LCS		Units: pCi/L			
LCS-1476 (07/13/15 14:22)	Analyte	RunNo:	123714	PrepDate:	07/01/15 0:00	BatchID:	10458	
		Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	4.9	0.2	5		97.5	76.4 - 122	

Radium 226 in Water - Dissolved		Sample Type	MS		Units: pCi/L			
MS-1476 (07/13/15 14:22)	Analyte	RunNo:	123714	PrepDate:	07/01/15 0:00	BatchID:	10458	
		Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Radium 226 (Dissolved)	4.3	0.2	5.03	0.3	79.2	69.4 - 120	

Radium 226 in Water - Dissolved		Sample Type	MSD		Units: pCi/L			
MSD-1476 (07/13/15 14:22)	Analyte	RunNo:	123714	PrepDate:	07/01/15 0:00	BatchID:	10458	
		Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
	Radium 226 (Dissolved)	4.2	0.2	4.3	1.31	78.1	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 a contract 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: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Silica as SiO2		Sample Type	MBLK		Units: mg/L				
MBLK DISS/CAT (06/18/15 12:05)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Silica as SiO2	122439	ND	0.1					

Silica as SiO2		Sample Type	LCS		Units: mg/L				
DISS LCS Q (06/18/15 12:07)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Silica as SiO2	122439	2.2	0.1	2.14		101	85 - 115	

Silica as SiO2		Sample Type	DUP		Units: mg/L				
S1506371-005CD (06/18/15 16:11)	Analyte	RunNo:	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
	Silica as SiO2	122439	8.2	0.1	8.3	0.855		20	

Solids By SM 2540		Sample Type	MBLK		Units: mg/L				
DI (06/17/15 14:28)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Total Dissolved Solids (180)	122559	10.0	10					

Solids By SM 2540		Sample Type	LCS		Units: mg/L				
CONTROL (06/17/15 14:29)	Analyte	RunNo:	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
	Total Dissolved Solids (180)	122559	230	10	226		102	90 - 110	

Solids By SM 2540		Sample Type	DUP		Units: mg/L				
S1506364-004A (06/17/15 14:40)	Analyte	RunNo:	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
	Total Dissolved Solids (180)	122559	5200	10	5180	0.385		20	

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 - J Analyte detected below quantitation limits
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 - R RPD outside accepted recovery limits
 - X Matrix Effect



ANALYTICAL QC SUMMARY REPORT

CLIENT: Power Resources (Cameco)
Work Order: S1506376
Project: Mine Unit #1 Stability Monitoring

Date: 7/17/2015
Report ID: S1506376001

Total (200.2) Metals by EPA 200.7 ICP - Water

Sample Type **MBLK**

Units: mg/L

MB-10291 (06/18/15 19:12)	RunNo: 122440	PrepDate: 06/18/15 12:39	BatchID: 10291				
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 - Water

Sample Type **LCS**

Units: mg/L

LCS-10291 (06/18/15 19:14)	RunNo: 122440	PrepDate: 06/18/15 12:39	BatchID: 10291				
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Iron	0.51	0.05	0.5		102	85 - 115	
Manganese	0.21	0.02	0.2		103	85 - 115	

Total (200.2) Metals by EPA 200.7 ICP - Water

Sample Type **MS**

Units: mg/L

S1506376-001ES (06/18/15 19:30)	RunNo: 122440	PrepDate: 06/18/15 6:30	BatchID: 10291				
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Iron	1.46	0.05	0.5	0.98	96.6	70 - 130	
Manganese	0.34	0.01	0.2	0.14	99.3	70 - 130	

Total (200.2) Metals by EPA 200.7 ICP - Water

Sample Type **MSD**

Units: mg/L

S1506376-001EMSD (06/18/15 19:32)	RunNo: 122440	PrepDate: 06/18/15 6:30	BatchID: 10291				
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Iron	1.48	0.05	1.46	1.05	99.7	20	
Manganese	0.34	0.01	0.34	1.36	102	20	

pH Water

Sample Type **LCS**

Units: s.u.

ATQC (06/17/15 16:59)	RunNo: 122367						
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
pH	9.1	0.1	8.6		105	90 - 110	

pH Water

Sample Type **DUP**

Units: s.u.

S1506364-001A (06/17/15 18:49)	RunNo: 122367						
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
pH	7.8	0.1	7.8	0.155		20	

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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