



Inter-Mountain Labs

Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

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All shaded fields must be completed.

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#WEB

Client Name Crow Butte Resources		Project Identification Marsland Expansion Area		Sampler (Signature/Attestation of Authenticity) Rhonda Grantham		Telephone # (308) 665-2215 ext 115	
Report Address PO Box 169 Crawford, NE 69339		Contact Name Rhonda Grantham		Email Rhonda_Grantham@cameco.com		Invoice Address same	
Purchase Order # 32258-000 OP		Quote # CR1106101		ANALYSES / PARAMETERS		REMARKS	
Uranium-Natural		Radium-226		Lead-210		Thorium-230	
ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	
1	SI 21032-001			MA-1	FT	1	X X X X
2	002			MA-2	FT	1	X X X X
3	003			MA-3	FT	1	X X X X
4	004			MA-4	FT	1	X X X X
5	005			MA-5	FT	1	X X X X
6							
7							
8							
9							
10				3rd Quarter, 2012 Environmental			
11				Air Sampling Composites			
12				as per attached air volumes			
13							
14							
LAB COMMENTS		Relinquished By (Signature/Printed) Rhonda Grantham		DATE 10/02/12	TIME	Received By (Signature/Printed) Mikayla Zimmer	
						DATE 10/8/12	
						TIME 9:30	
SHIPPING INFO		MATRIX CODES		TURN AROUND TIMES		COMPLIANCE INFORMATION	
<input type="checkbox"/> UPS		Water WT		Check desired service		Compliance Monitoring ? Y / N	
<input type="checkbox"/> FedEx		Soil SL		<input checked="" type="checkbox"/> Standard turnaround		Program (SDWA, NPDES,...)	
<input type="checkbox"/> USPS		Solid SD		<input type="checkbox"/> RUSH - 5 Working Days		PWSID / Permit #	
<input type="checkbox"/> Hand Carried		Filter FT		<input type="checkbox"/> URGENT < 2 Working Days		Chlorinated? Y / N	
<input type="checkbox"/> Other		Other OT		Rush & Urgent Surcharges will be applied		Sample Disposal: Lab X Client	
						ADDITIONAL REMARKS	
						Sample Air Volumes Attached	
						Sampling Interval: 6/29/12 - 10/1/12	

Environmental Air Sampling

Marsland Expansion Area

Pump #	11497	Pump Location	MA-1
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Date	Volume (liters)
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7/11/2012	8.50E+05
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7/25/2012	8.84E+05
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8/1/2012	8.04E+04
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8/15/2012	9.38E+05
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8/29/2012	9.96E+05
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9/6/2012	5.68E+05
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9/12/2012	4.31E+05
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9/19/2012	5.00E+05
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10/1/2012	8.62E+05
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Total Volume (liter	6108764
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Environmental Air Sampling

Marsland Expansion Area

Pump #	11491	Pump Location	MA-2
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Date	Volume (liters)
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7/11/2012	7.98E+05
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7/25/2012	4.25E+05
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8/1/2012	4.84E+05
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8/15/2012	9.38E+05
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8/29/2012	9.96E+05
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9/6/2012	5.69E+05
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9/12/2012	4.32E+05
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9/19/2012	5.00E+05
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10/1/2012	8.62E+05
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Total Volume (liter	6002630
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Environmental Air Sampling

Marsland Expansion Area

Pump #	11112	Pump Location	MA-3
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Date	Volume (liters)
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7/11/2012	8.44E+05
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7/25/2012	9.99E+05
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8/1/2012	4.96E+05
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8/15/2012	9.38E+05
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8/29/2012	9.97E+05
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9/6/2012	4.67E+05
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9/12/2012	4.30E+05
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9/19/2012	5.00E+05
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10/1/2012	8.61E+05
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Total Volume (liters)	6532003
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Environmental Air Sampling

Marsland Expansion Area

Pump #	11498	Pump Location	MA-4
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Date	Volume (liters)
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7/11/2012	3.23E+05
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7/25/2012	9.20E+05
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8/1/2012	497110
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8/15/2012	9.37E+05
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8/29/2012	9.84E+05
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9/6/2012	4.54E+05
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9/12/2012	4.13E+05
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9/19/2012	5.00E+05
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10/1/2012	8.62E+05
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Total Volume (liters)	5889397
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Environmental Air Sampling

Marsland Expansion Area

Pump #	11487	Pump Location	MA-5
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Date	Volume (liters)
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7/11/2012	8.40E+05
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7/25/2012	5.86E+05
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8/1/2012	465240
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8/15/2012	8.97E+04
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8/29/2012	9.96E+05
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9/6/2012	5.68E+05
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9/12/2012	4.31E+05
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9/19/2012	5.00E+05
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10/1/2012	8.62E+05
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Total Volume (liters)	5337479
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**Date:** 5/1/2015**CLIENT:** Cameco Resources, Crow Butte Operation**Project:** Marshland Expansion Area**Lab Order:** S1210132**CASE NARRATIVE****Report ID:** S1210132002

(Replaces S1210132001)

Samples MA-1, MA-2, MA-3, MA-4, and MA-5 were received on October 8, 2012.

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

NRC radiological air particulate filters, animal, vegetation, soil and sediment samples may be composited by date and location per client's monitoring program requirements. Highly carbonaceous samples may require ashing. Samples are subjected to a modified USEPA SW-846 Method 3050B mineral acid digestion as appropriate. Analysis of the resulting solutions and digestates is performed using approved TNI, USEPA, and industry recognized analytical techniques. Where client-provided air volumes corresponding to the air filter composites exist, aqueous digestate results are converted to radiological particulate concentrations in air (e.g. $\mu\text{Ci/mL}$). Quality control parameters acceptance criteria are defined by USEPA programs, and in USNRC Regulatory Guide 4.14 (Radiological Effluent and Environmental Monitoring at Uranium Mills), USNRC Regulatory Guide 4.15 (Quality Assurance for Radiological Monitoring Programs – Effluent Streams and the Environment), the TNI Standard EL-V1-2009, and Inter-Mountain Labs internal quality procedures.

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

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

Company: Cameco Resources, Crow Butte Operation
PO Box 169
Crawford, NE 69339

Date Reported 10/29/2012
Report ID: S1210132001

ProjectName: Marshland Expansion Area
Lab ID: S1210132-001
ClientSample ID: MA-1
COC:

WorkOrder: S1210132
CollectionDate:
DateReceived: 10/8/2012 9:30:00 AM
FieldSampler:
Matrix: Filter

Comments Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6108764	Liters			Field	
Radionuclides - Filter						
Lead 210	116	pCi/Filter		2	OTW01	10/25/2012 1407 SH
Lead 210 Precision (±)	7.0	pCi/Filter			OTW01	10/25/2012 1407 SH
Lead 210	1.9E-14	µCi/mL		2.0E-15	Calculation	10/29/2012 1517 WN
Lead 210 Precision (±)	1.1E-15	µCi/mL			Calculation	10/29/2012 1517 WN
Radium 226	0.4	pCi/Filter		0.3	SM 7500RAB	10/22/2012 1040 SH
Radium 226 Precision (±)	0.1	pCi/Filter			SM 7500RAB	10/22/2012 1040 SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	10/23/2012 900 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	10/23/2012 900 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium-229 Tracer (30-120)	86.9	%		0.2	ACW10	10/23/2012 900 MB
Uranium	0.3	pCi/Filter		0.3	EPA 200.8	10/09/2012 1554 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN

These results apply only to the samples tested.

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

RL - Reporting Limit

- 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
- O Outside the Range of Dilutions

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

Company: Cameco Resources, Crow Butte Operation
PO Box 169
Crawford, NE 69339

Date Reported 10/29/2012
Report ID: S1210132001

ProjectName: Marshland Expansion Area
Lab ID: S1210132-002
ClientSample ID: MA-2
COC:

WorkOrder: S1210132
CollectionDate:
DateReceived: 10/8/2012 9:30:00 AM
FieldSampler:
Matrix: Filter

Comments Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6002630	Liters			Field	
Radionuclides - Filter						
Lead 210	122	pCi/Filter		2	OTW01	10/25/2012 1407 SH
Lead 210 Precision (±)	7.4	pCi/Filter			OTW01	10/25/2012 1407 SH
Lead 210	2.0E-14	µCi/mL		2.0E-15	Calculation	10/29/2012 1517 WN
Lead 210 Precision (±)	1.2E-15	µCi/mL			Calculation	10/29/2012 1517 WN
Radium 226	3.0	pCi/Filter		0.3	SM 7500RAB	10/22/2012 1040 SH
Radium 226 Precision (±)	0.4	pCi/Filter			SM 7500RAB	10/22/2012 1040 SH
Radium 226	5.0E-16	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Radium 226 Precision (±)	6.7E-17	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	10/23/2012 900 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	10/23/2012 900 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium-229 Tracer (30-120)	96.8	%		0.2	ACW10	10/23/2012 900 MB
Uranium	ND	pCi/Filter		0.3	EPA 200.8	10/09/2012 1623 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN

These results apply only to the samples tested.

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

RL - Reporting Limit

- 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
- O Outside the Range of Dilutions

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

Company: Cameco Resources, Crow Butte Operation
PO Box 169
Crawford, NE 69339

Date Reported 10/29/2012
Report ID: S1210132001

ProjectName: Marshland Expansion Area
Lab ID: S1210132-003
ClientSample ID: MA-3
COC:

WorkOrder: S1210132
CollectionDate:
DateReceived: 10/8/2012 9:30:00 AM
FieldSampler:
Matrix: Filter

Comments Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6532003	Liters			Field	
Radionuclides - Filter						
Lead 210	129	pCi/Filter		2	OTW01	10/25/2012 1407 SH
Lead 210 Precision (±)	7.6	pCi/Filter			OTW01	10/25/2012 1407 SH
Lead 210	2.0E-14	µCi/mL		2.0E-15	Calculation	10/29/2012 1517 WN
Lead 210 Precision (±)	1.2E-15	µCi/mL			Calculation	10/29/2012 1517 WN
Radium 226	0.9	pCi/Filter		0.3	SM 7500RAB	10/22/2012 1040 SH
Radium 226 Precision (±)	0.2	pCi/Filter			SM 7500RAB	10/22/2012 1040 SH
Radium 226	1.3E-16	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Radium 226 Precision (±)	3.1E-17	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	10/23/2012 900 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	10/23/2012 900 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium-229 Tracer (30-120)	95.0	%		0.2	ACW10	10/23/2012 900 MB
Uranium	0.4	pCi/Filter		0.3	EPA 200.8	10/09/2012 1628 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN

These results apply only to the samples tested.

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

RL - Reporting Limit

- 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
- O Outside the Range of Dilutions

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

**Sample Analysis Report**

Company: Cameco Resources, Crow Butte Operation
PO Box 169
Crawford, NE 69339

Date Reported 10/29/2012
Report ID: S1210132001

ProjectName: Marshland Expansion Area
Lab ID: S1210132-004
ClientSample ID: MA-4
COC:

WorkOrder: S1210132
CollectionDate:
DateReceived: 10/8/2012 9:30:00 AM
FieldSampler:
Matrix: Filter

Comments Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	5889397	Liters			Field	
Radionuclides - Filter						
Lead 210	103	pCi/Filter		2	OTW01	10/25/2012 1407 SH
Lead 210 Precision (±)	6.3	pCi/Filter			OTW01	10/25/2012 1407 SH
Lead 210	1.8E-14	µCi/mL		2.0E-15	Calculation	10/29/2012 1517 WN
Lead 210 Precision (±)	1.1E-15	µCi/mL			Calculation	10/29/2012 1517 WN
Radium 226	0.6	pCi/Filter		0.3	SM 7500RAB	10/22/2012 1040 SH
Radium 226 Precision (±)	0.2	pCi/Filter			SM 7500RAB	10/22/2012 1040 SH
Radium 226	1.0E-16	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Radium 226 Precision (±)	3.4E-17	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	10/23/2012 900 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	10/23/2012 900 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium-229 Tracer (30-120)	89.7	%		0.2	ACW10	10/23/2012 900 MB
Uranium	0.5	pCi/Filter		0.3	EPA 200.8	10/09/2012 1633 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN

These results apply only to the samples tested.

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

RL - Reporting Limit

- 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
- O Outside the Range of Dilutions

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

**Sample Analysis Report**

Company: Cameco Resources, Crow Butte Operation
PO Box 169
Crawford, NE 69339

Date Reported 10/29/2012
Report ID: S1210132001

ProjectName: Marshland Expansion Area
Lab ID: S1210132-005
ClientSample ID: MA-5
COC:

WorkOrder: S1210132
CollectionDate:
DateReceived: 10/8/2012 9:30:00 AM
FieldSampler:
Matrix: Filter

Comments Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	5337479	Liters			Field	
Radionuclides - Filter						
Lead 210	103	pCi/Filter		2	OTW01	10/25/2012 1407 SH
Lead 210 Precision (±)	6.6	pCi/Filter			OTW01	10/25/2012 1407 SH
Lead 210	1.9E-14	µCi/mL		2.0E-15	Calculation	10/29/2012 1517 WN
Lead 210 Precision (±)	1.2E-15	µCi/mL			Calculation	10/29/2012 1517 WN
Radium 226	ND	pCi/Filter		0.3	SM 7500RAB	10/22/2012 1040 SH
Radium 226 Precision (±)	NA	pCi/Filter			SM 7500RAB	10/22/2012 1040 SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	10/23/2012 900 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	10/23/2012 900 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	10/29/2012 1517 WN
Thorium-229 Tracer (30-120)	96.5	%		0.2	ACW10	10/23/2012 900 MB
Uranium	ND	pCi/Filter		0.3	EPA 200.8	10/09/2012 1638 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	10/29/2012 1517 WN

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- C Calculated Value
- H Holding times for preparation or analysis exceeded
- L Analyzed by a contract laboratory
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

- 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
- O Outside the Range of Dilutions

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

**ANALYTICAL QC SUMMARY REPORT****CLIENT:** Cameco Resources, Crow Butte Operation**Date:** 10/29/2012**Work Order:** S1210132**Report ID:** S1210132001**Project:** Marshland Expansion Area**Uranium, Air Filter Analysis**Sample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 88118	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK	10/09/12 12:27	Uranium	ND	0.3					

Sample Type **LCS** Units: pCi/Filter

Sample ID	RunNo: 88118	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS	10/09/12 12:23	Uranium	69.7	0.3	67.7		103	85 - 115	

Sample Type **MS** Units: pCi/Filter

Sample ID	RunNo: 88118	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1210132-001BS	10/09/12 16:14	Uranium	760	0.3	745	0.3	102	70 - 130	

Sample Type **MSD** Units: pCi/Filter

Sample ID	RunNo: 88118	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1210132-001BMSD	10/09/12 16:18	Uranium	805	0.3	760	5.89	108	20	

Sample Type **DUP** Units: pCi/Filter

Sample ID	RunNo: 88118	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1210132-001BD	10/09/12 15:59	Uranium	0.3	0.3	0.3	3.67		20	

Lead 210 in FiltersSample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 88835	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB12-284	10/25/12 14:07	Lead 210	ND	2					

Sample Type **LCS** Units: pCi/Filter

Sample ID	RunNo: 88835	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS12-284	10/25/12 14:07	Lead 210	14	2	12.5		108	70 - 130	

Sample Type **MS** Units: pCi/Filter

Sample ID	RunNo: 88835	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	10/25/12 14:07	Lead 210	13	2	12.5	ND	98.4	70 - 130	

Sample Type **MSD** Units: pCi/Filter

Sample ID	RunNo: 88835	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
TAP WATER MSD	10/25/12 14:07	Lead 210	13	2	13	3.36	102	30	

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

**ANALYTICAL QC SUMMARY REPORT****CLIENT:** Cameco Resources, Crow Butte Operation**Date:** 10/29/2012**Work Order:** S1210132**Report ID:** S1210132001**Project:** Marshland Expansion Area**Radium 226 Air Filter Analysis**Sample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 88678	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB12-291	10/22/12 10:40	Radium 226	ND	0.3					

Sample Type **LCS** Units: pCi/Filter

Sample ID	RunNo: 88678	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS12-291	10/22/12 10:40	Radium 226	5.2	0.3	5.06		103	70 - 130	

Sample Type **MS** Units: pCi/Filter

Sample ID	RunNo: 88678	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	10/22/12 13:56	Radium 226	5.0	0.3	5.06	ND	99.4	70 - 130	

Sample Type **MSD** Units: pCi/Filter

Sample ID	RunNo: 88678	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
TAP WATER MSD	10/22/12 13:56	Radium 226	5.2	0.3	5.0	3.25	103	30	

Thorium Air Filter AnalysisSample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 88786	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB12- 284	10/23/12 9:00	Thorium-230	ND	0.2					

Sample Type **LCS** Units: pCi/Filter

Sample ID	RunNo: 88786	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS12- 284	10/23/12 9:00	Thorium-230	13.2	0.2	12.5		105	70 - 130	

Sample Type **LCSD** Units: pCi/Filter

Sample ID	RunNo: 88786	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
LCSD12- 284	10/23/12 9:00	Thorium-230	12.5	0.2	13.2	5.11	100	30	

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

**Air Filter Summary Report****Client: Cameco Resources, Crow Butte Operation****Client Sample ID: MA-1****Lab ID: S1210132-001****Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)****Sample Air Volume: 6108764 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	116	7.0	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	0.4	0.1	<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1207116-001**Sampled 4/2/2012-6/29/2012 (2012 2nd Qtr)****Sample Air Volume: 6196200 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	68.9	6.1	1E-14	1E-15	2E-15	6 E-13	Day	1.67
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	<0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1204105-001**Sampled 1/4/12 to 4/2/12 (2012 1st Qtr)****Sample Air Volume: 6334637 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	115	7.5	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	1.4		2E-16		1E-16	9 E-14	Year	0.22

**Air Filter Summary Report****Client: Cameco Resources, Crow Butte Operation****Client Sample ID: MA-2****Lab ID: S1210132-002****Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)****Sample Air Volume: 6002630 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	122	7.4	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	3.0	0.4	5E-16	7E-17	1E-16	9 E-13	Week	0.06
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	<0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1207116-002**Sampled 4/2/2012-6/29/2012 (2012 2nd Qtr)****Sample Air Volume: 6203400 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	82.7	5.4	1E-14	9E-16	2E-15	6 E-13	Day	1.67
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	<0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1204105-002**Sampled 1/4/12 to 4/2/12 (2012 1st Qtr)****Sample Air Volume: 6337547 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	108	7.7	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	1.8		3E-16		1E-16	9 E-14	Year	0.33

**Air Filter Summary Report****Client: Cameco Resources, Crow Butte Operation****Client Sample ID: MA-3****Lab ID: S1210132-003****Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)****Sample Air Volume: 6532003 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	129	7.6	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	0.9	0.2	1E-16	3E-17	1E-16	9 E-13	Week	0.01
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	0.4		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1207116-003**Sampled 4/2/2012-6/29/2012 (2012 2nd Qtr)****Sample Air Volume: 6067000 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	75.7	5.1	1E-14	8E-16	2E-15	6 E-13	Day	1.67
Radium 226	0.5	0.1	<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1204105-003**Sampled 1/4/12 to 4/2/12 (2012 1st Qtr)****Sample Air Volume: 6322001 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	109	7.0	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	0.6	0.2	1E-16	3E-17	1E-16	9 E-13	Week	0.01
Thorium 230	1.0	0.4	2E-16	6E-17	1E-16	3 E-14	Year	0.67
Uranium	1.9		3E-16		1E-16	9 E-14	Year	0.33

**Air Filter Summary Report****Client: Cameco Resources, Crow Butte Operation****Client Sample ID: MA-4****Lab ID: S1210132-004****Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)****Sample Air Volume: 5889397 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	103	6.3	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	0.6	0.2	1E-16	3E-17	1E-16	9 E-13	Week	0.01
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	0.5		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1207116-004**Sampled 4/2/2012-6/29/2012 (2012 2nd Qtr)****Sample Air Volume: 6049000 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	78.2	5.2	1E-14	9E-16	2E-15	6 E-13	Day	1.67
Radium 226	0.3	0.1	<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	0.4		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1204105-004**Sampled 1/4/12 to 4/2/12 (2012 1st Qtr)****Sample Air Volume: 6333500 Liters**

Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	120	7.9	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	0.4	0.1	<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	0.3	0.2	<1E-16		1E-16	3 E-14	Year	0.00
Uranium	1.6		3E-16		1E-16	9 E-14	Year	0.33

**Air Filter Summary Report****Client: Cameco Resources, Crow Butte Operation****Client Sample ID: MA-5**

Lab ID: S1210132-005			Sampled 6/29/2012-10/1/2012 (2012 3rd Qtr)					
			Sample Air Volume: 5337479 Liters					
Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	103	6.6	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	<0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1207116-005			Sampled 4/2/2012-6/29/2012 (2012 2nd Qtr)					
			Sample Air Volume: 5575200 Liters					
Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	62.2	4.8	1E-14	9E-16	2E-15	6 E-13	Day	1.67
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	<0.2		<1E-16		1E-16	3 E-14	Year	0.00
Uranium	<0.3		<1E-16		1E-16	9 E-14	Year	0.00

Lab ID: S1204105-005			Sampled 1/4/12 to 4/2/12 (2012 1st Qtr)					
			Sample Air Volume: 6338171 Liters					
Analyte	Result pCi/filter	Precision ± pCi/filter	Result µCi/ml	Precision ± µCi/ml	RL	10 CFR Pt 20 Effluent Limit	Effluent Class	% Effluent Conc.
Lead 210	116	7.2	2E-14	1E-15	2E-15	6 E-13	Day	3.33
Radium 226	<0.3		<1E-16		1E-16	9 E-13	Week	0.00
Thorium 230	0.2	0.2	<1E-16		1E-16	3 E-14	Year	0.00
Uranium	1.4		2E-16		1E-16	9 E-14	Year	0.22