



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	ANALYSES / PARAMETERS	
Invoice Address same	Email Rhonda_Grantham@cameco.com		
	Phone (308) 665-2215 ext. 115		
	Purchase Order # 32258-000 OP	Quote # CR1106101	

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	Uranium-Natural	Radium-226	Lead-210	Thorium-230					REMARKS
1	5130108-001			MA-1	FT	1	X	X	X	X					To be analyzed as per
2	002			MA-2	FT	1	X	X	X	X					Reg. Guide 4.14
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					MUST ACHIEVE
6															REG. GUIDE 4.14
7															DETECTION LIMITS
8															
9															
10				4th Quarter, 2012 Environmental											
11				Air Sampling Composites											Report Results
12				as per attached air volumes											Prior To:
13															1-Feb-13
14															

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	Rhonda Grantham	01/03/13		Malby Zimmer	1/9/13	10:30

SHIPPING INFO	MATRIX CODES	TURN AROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other	Water WT Soil SL Solid SD Filter FT Other OT	Check desired service <input checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input 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 X Client	Sample Air Volumes Attached Sampling Interval: 10/1/12- 1/2/13

Environmental Air Sampling

Marsland Expansion Area

Pump # 11106 Pump Location MA-1

Date Volume (liters)

10/15/2012 9.99E+05

10/31/2012 1.07E+06

11/7/2012 5.03E+05

11/14/2012 5.02E+05

11/21/2012 5.01E+05

11/28/2012 5.03E+05

12/5/2012 5.00E+05

12/12/2012 6.07E+05

12/19/2012 4.98E+05

12/26/2012 5.01E+05

1/2/2013 4.99E+05

Total Volume (liter) 6682410

Environmental Air Sampling

Marsland Expansion Area

Pump #	11114	Pump Location	MA-2
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Date	Volume (liters)
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10/15/2012	9.99E+05
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10/31/2012	1.07E+06
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11/7/2012	5.04E+05
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11/14/2012	5.02E+05
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11/21/2012	5.02E+05
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11/28/2012	5.03E+05
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12/5/2012	5.00E+05
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12/12/2012	5.06E+05
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12/19/2012	4.99E+05
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12/26/2012	4.97E+05
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1/2/2013	5.00E+05
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Total Volume (liter)	6581476
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Environmental Air Sampling

Marsland Expansion Area

Pump # 11110 Pump Location MA-3

Date Volume (liters)

10/15/2012	998280
10/31/2012	1066000
11/7/2012	503224
11/14/2012	501863
11/21/2012	500094
11/28/2012	502079
12/5/2012	499301
12/12/2012	506368
12/19/2012	498529
12/26/2012	498723
1/2/2013	501236

Total Volume (liters) 6575697

Environmental Air Sampling

Marsland Expansion Area

Pump # 11492 Pump Location MA-4

Date Volume (liters)

10/15/2012	1.00E+06
10/31/2012	1.07E+06
11/7/2012	503032
11/14/2012	5.02E+05
11/21/2012	5.01E+05
11/28/2012	5.02E+05
12/5/2012	5.00E+05
12/12/2012	5.06E+05
12/19/2012	4.99E+05
12/26/2012	4.99E+05
1/2/2013	4.99E+05

Total Volume (liters) 6582882

Environmental Air Sampling

Marsland Expansion Area

Pump #	11115	Pump Location	MA-5
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Date	Volume (liters)
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10/15/2012	1.00E+06
10/31/2012	1.07E+06
11/7/2012	503155
11/14/2012	5.02E+05
11/21/2012	5.02E+05
11/28/2012	5.02E+05
12/5/2012	5.00E+05
12/12/2012	5.06E+05
12/19/2012	4.99E+05
12/26/2012	4.99E+05
1/2/2013	5.00E+05

Total Volume (liters)	6584474
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**Date:** 5/1/2015**CLIENT:** Cameco Resources, Crow Butte Operation**Project:** Marshland Expansion Area**Lab Order:** S1301108**CASE NARRATIVE****Report ID:** S1301108002

(Replaces S1301108001)

Samples MA-1, MA-2, MA-3, MA-4, and MA-5 were received on January 9, 2013.

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 2/8/2013
Report ID: S1301108001

ProjectName: Marshland Expansion Area
Lab ID: S1301108-001
ClientSample ID: MA-1
COC:

WorkOrder: S1301108
CollectionDate: 1/2/2013
DateReceived: 1/9/2013 10:30:00 AM
FieldSampler: RG
Matrix: Filter

Comments Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Field						
Actual Volume	6682410	Liters			Field	01/02/2013 000
Radionuclides - Filter						
Lead 210	129	pCi/Filter		2	OTW01	01/29/2013 1055 SH
Lead 210 Precision (±)	5.8	pCi/Filter			OTW01	01/29/2013 1055 SH
Lead 210	1.9E-14	µCi/mL		2.0E-15	Calculation	02/08/2013 1100 WN
Lead 210 Precision (±)	8.7E-16	µCi/mL			Calculation	02/08/2013 1100 WN
Radium 226	0.3	pCi/Filter		0.3	SM 7500RAB	01/22/2013 1611 SH
Radium 226 Precision (±)	0.1	pCi/Filter			SM 7500RAB	01/22/2013 1611 SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100 WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100 WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	01/31/2013 905 MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	01/31/2013 905 MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100 WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100 WN
Uranium	0.4	pCi/Filter		0.3	EPA 200.8	01/14/2013 1726 MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100 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 2/8/2013
Report ID: S1301108001

ProjectName: Marshland Expansion Area
Lab ID: S1301108-002
ClientSample ID: MA-2
COC:

WorkOrder: S1301108
CollectionDate: 1/2/2013
DateReceived: 1/9/2013 10:30:00 AM
FieldSampler: RG
Matrix: Filter

Comments Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6581476	Liters			Field	01/02/2013 000
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Radionuclides - Filter

Lead 210	128	pCi/Filter		2	OTW01	01/29/2013 1055	SH
Lead 210 Precision (±)	6.1	pCi/Filter			OTW01	01/29/2013 1055	SH
Lead 210	1.9E-14	µCi/mL		2.0E-15	Calculation	02/08/2013 1100	WN
Lead 210 Precision (±)	9.3E-16	µCi/mL			Calculation	02/08/2013 1100	WN
Radium 226	ND	pCi/Filter		0.3	SM 7500RAB	01/22/2013 1611	SH
Radium 226 Precision (±)	NA	pCi/Filter			SM 7500RAB	01/22/2013 1611	SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Thorium 230	0.2	pCi/Filter		0.2	ACW10	01/31/2013 905	MB
Thorium 230 Precision (±)	0.2	pCi/Filter			ACW10	01/31/2013 905	MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Uranium	ND	pCi/Filter		0.3	EPA 200.8	01/14/2013 1731	MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	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, Assistant Laboratory Manager



Sample Analysis Report

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

Date Reported 2/8/2013
Report ID: S1301108001

ProjectName: Marshland Expansion Area
Lab ID: S1301108-003
ClientSample ID: MA-3
COC:

WorkOrder: S1301108
CollectionDate: 1/2/2013
DateReceived: 1/9/2013 10:30:00 AM
FieldSampler: RG
Matrix: Filter

Comments Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6575697	Liters			Field	01/02/2013 000
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Radionuclides - Filter

Lead 210	128	pCi/Filter		2	OTW01	01/29/2013 1055	SH
Lead 210 Precision (±)	5.8	pCi/Filter			OTW01	01/29/2013 1055	SH
Lead 210	2.0E-14	µCi/mL		2.0E-15	Calculation	02/08/2013 1100	WN
Lead 210 Precision (±)	8.8E-16	µCi/mL			Calculation	02/08/2013 1100	WN
Radium 226	ND	pCi/Filter		0.3	SM 7500RAB	01/22/2013 1611	SH
Radium 226 Precision (±)	NA	pCi/Filter			SM 7500RAB	01/22/2013 1611	SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	01/31/2013 905	MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	01/31/2013 905	MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Uranium	ND	pCi/Filter		0.3	EPA 200.8	01/14/2013 1736	MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	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 2/8/2013
Report ID: S1301108001

ProjectName: Marshland Expansion Area
Lab ID: S1301108-004
ClientSample ID: MA-4
COC:

WorkOrder: S1301108
CollectionDate: 1/2/2013
DateReceived: 1/9/2013 10:30:00 AM
FieldSampler: RG
Matrix: Filter

Comments Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6582882	Liters			Field	01/02/2013 000
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Radionuclides - Filter

Lead 210	132	pCi/Filter		2	OTW01	01/29/2013 1055	SH
Lead 210 Precision (±)	5.8	pCi/Filter			OTW01	01/29/2013 1055	SH
Lead 210	2.0E-14	µCi/mL		2.0E-15	Calculation	02/08/2013 1100	WN
Lead 210 Precision (±)	8.8E-16	µCi/mL			Calculation	02/08/2013 1100	WN
Radium 226	0.4	pCi/Filter		0.3	SM 7500RAB	01/23/2013 903	SH
Radium 226 Precision (±)	0.1	pCi/Filter			SM 7500RAB	01/23/2013 903	SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	01/31/2013 905	MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	01/31/2013 905	MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Uranium	ND	pCi/Filter		0.3	EPA 200.8	01/14/2013 1741	MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	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 2/8/2013
Report ID: S1301108001

ProjectName: Marshland Expansion Area
Lab ID: S1301108-005
ClientSample ID: MA-5
COC:

WorkOrder: S1301108
CollectionDate: 1/2/2013
DateReceived: 1/9/2013 10:30:00 AM
FieldSampler: RG
Matrix: Filter

Comments Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
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Field

Actual Volume	6584474	Liters			Field	01/02/2013 000
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Radionuclides - Filter

Lead 210	134	pCi/Filter		2	OTW01	01/29/2013 1055	SH
Lead 210 Precision (±)	6.1	pCi/Filter			OTW01	01/29/2013 1055	SH
Lead 210	2.0E-14	µCi/mL		2.0E-15	Calculation	02/08/2013 1100	WN
Lead 210 Precision (±)	9.3E-16	µCi/mL			Calculation	02/08/2013 1100	WN
Radium 226	ND	pCi/Filter		0.3	SM 7500RAB	01/23/2013 903	SH
Radium 226 Precision (±)	NA	pCi/Filter			SM 7500RAB	01/23/2013 903	SH
Radium 226	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Radium 226 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Thorium 230	ND	pCi/Filter		0.2	ACW10	01/31/2013 905	MB
Thorium 230 Precision (±)	NA	pCi/Filter			ACW10	01/31/2013 905	MB
Thorium 230	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	WN
Thorium 230 Precision (±)	NA	µCi/mL			Calculation	02/08/2013 1100	WN
Uranium	ND	pCi/Filter		0.3	EPA 200.8	01/14/2013 1746	MS
Uranium	ND	µCi/mL		1.0E-16	Calculation	02/08/2013 1100	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

**ANALYTICAL QC SUMMARY REPORT****CLIENT:** Cameco Resources, Crow Butte Operation**Date:** 2/8/2013**Work Order:** S1301108**Report ID:** S1301108001**Project:** Marshland Expansion Area**Uranium, Air Filter Analysis**Sample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 91354	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MBLK	01/14/13 13:34	Uranium	ND	0.3					

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

Sample ID	RunNo: 91354	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS	01/14/13 13:30	Uranium	70.4	0.3	67.7		104	85 - 115	

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

Sample ID	RunNo: 91354	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
S1301107-004AS	01/14/13 17:06	Uranium	795	0.3	745	0.6	107	70 - 130	

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

Sample ID	RunNo: 91354	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
S1301107-004AMSD	01/14/13 17:21	Uranium	770	0.3	795	3.10	103	20	

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

Sample ID	RunNo: 91354	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
S1301107-004AD	01/14/13 17:01	Uranium	0.7	0.3	0.6	8.25		20	

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

Sample ID	RunNo: 91970	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB13-017	01/28/13 13:34	Lead 210	ND	2					

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

Sample ID	RunNo: 91970	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS13-017	01/28/13 13:34	Lead 210	13	2	12.4		103	70 - 130	

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

Sample ID	RunNo: 91970	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	01/29/13 10:55	Lead 210	13	2	12.2	ND	108	70 - 130	

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:** 2/8/2013**Work Order:** S1301108**Report ID:** S1301108001**Project:** Marshland Expansion Area**Radium 226 Air Filter Analysis**Sample Type **MBLK** Units: pCi/Filter

Sample ID	RunNo: 91591	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB13-016	01/22/13 16:11	Radium 226	ND	0.3					

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

Sample ID	RunNo: 91591	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS13-016	01/22/13 16:11	Radium 226	5.0	0.3	5.08		99.2	70 - 130	

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

Sample ID	RunNo: 91591	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
TAP WATER MS	01/23/13 9:03	Radium 226	5.5	0.3	5.08	ND	108	70 - 130	

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

Sample ID	RunNo: 91591	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
TAP WATER MSD	01/23/13 9:03	Radium 226	5.9	0.3	5.5	7.38	116	30	

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

Sample ID	RunNo: 91911	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
MB13-021	01/31/13 9:05	Thorium-230	ND	0.2					

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

Sample ID	RunNo: 91911	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
LCS13-021	01/31/13 9:05	Thorium-230	12.9	0.2	12.5		103	70 - 130	

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

Sample ID	RunNo: 91911	Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
LCSD13-021	01/31/13 9:05	Thorium-230	11.7	0.2	12.9	8.64	94.0	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: S1301108-001****Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)****Sample Air Volume: 6682410 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	5.8	2E-14	9E-16	2E-15	6 E-13	Day	3.33
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: 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: S1301108-002****Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)****Sample Air Volume: 6581476 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	128	6.1	2E-14	9E-16	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	.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: 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: S1301108-003 Sampled 10/1/2012-1/2/2013 (2012 4th Qtr)			Sample Air Volume: 6575697 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	128	5.8	2E-14	9E-16	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: 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: S1301108-004 Sampled 10/1/2012-1/2/2013 (2012 4th Qtr) Sample Air Volume: 6582882 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	132	5.8	2E-14	9E-16	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: 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: S1301108-005 Sampled 10/1/2012-1/2/2013 (2012 4th Qtr) Sample Air Volume: 6584474 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	134	6.1	2E-14	9E-16	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: 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