

CAMECO RESOURCES
CROW BUTTE OPERATION
86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169



(308) 665-2215
(308) 665-2341 - FAX

July 25, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

40-8943

Mr. Thomas Lancaster, Project Manager
Uranium Recovery Licensing Branch
Division of Decommissioning, Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
Mailstop T-8F5
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Submittal of alfalfa and soil data for Marsland Exploration Area

Dear Mr. Lancaster:

To complete the required preoperational sampling for the Marsland Exploration Area (MEA), Cameco Resources collected alfalfa and soil samples in the summer and fall of 2017. The results of these samples are attached.

If you have any questions or require any further information, please do not hesitate to call me at 1-308-665-2215 ext. 117.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Walter Nelson
SHEQ Coordinator

cc: NRC - Document Control Desk
CBO - File
ec: CBO

Attachments: As stated

NMSSDI



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.051
Gillette, WY 866.686.7175 • Helena, MT 877.472.071

ANALYTICAL SUMMARY REPORT

December 06, 2017

Crow Butte Resources
86 Crow Butte Rd
Crawford, NE 69339

Work Order: C17060308

Project Name: Marsland Baseline Crop Sampling Alfalfa 2017

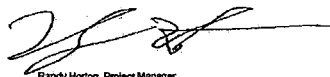
Energy Laboratories, Inc. Casper WY received the following 3 samples for Crow Butte Resources on 6/8/2017 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C17060308-001	Marsland Alfalfa Sample 1	06/07/17 00:00	06/08/17	Vegetation	Uranium, Total Digestion, Radiochemistry Lead 210 Polonium 210 Radium 226 Thorium, Isotopic
C17060308-002	Marsland Alfalfa Sample 2	06/07/17 00:00	06/08/17	Vegetation	Same As Above
C17060308-003	Marsland Alfalfa Sample 3	06/07/17 00:00	06/08/17	Vegetation	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:


Randy Horton, Project Manager

Digitally signed by
Randy Horton
Date: 2017.12.07 13:15:25 -07:00



CLIENT: Crow Butte Resources
Project: Marsland Baseline Crop Sampling Alfalfa 2017
Work Order: C17060308

Revised Date: 12/06/17

Report Date: 08/28/17

CASE NARRATIVE

REVISED/SUPPLEMENTAL REPORT, 2 Revised 12/6/2017

Per request from Walter Nelson on 12/5/17, recount Thorium 230 on samples 001A, 002A and 003A. The MDC for U flagged data did not meet NRC RG 4.14 recommended limits.

The rerun results for all three Thorium 230 samples now meet the criteria after employing a 1,000 minute count (recommended limit for a single counting event). We believe the original result was reported due to inattention to detail. The recounted results will be reported for the two samples listed above.

The report has been revised and replaces any previously issued report in its entirety.

We apologize for any inconvenience this may have caused.

REVISED/SUPPLEMENTAL REPORT Revised 12/1/2017

Per request from ELI data validation staff on 11/1/17, re-analyze Uranium on samples 002A and 003A from a new split of the remaining volume. Sample 001A was not reanalyzed since no volume remained.

Before re-analysis bottle identifications were verified.

Please see attachment for a comparison of the Uranium results.

The rerun result for 002A did not match the original results. We believe the original result was reported due to a lack of insuring preparation batch homogeneity prior to making the splits for the metals analyses. The re-analysis result will be reported for the two samples listed above.

The report has been revised and replaces any previously issued report in its entirety.

We apologize for any inconvenience this may have caused.

ANALYSIS NOTE: REANALYSIS FOR URANIUM

As a result of the low LCS2 responses the subcontract lab added a LFB (second source standard but not subjected to the preparation process), successfully recovering the Uranium within the acceptance range.

SUBCONTRACTED DATA

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

ANALYSIS/QUALITY ASSURANCE COMMENTS

During Quality Assurance Validation an issue was seen with the Laboratory Control Sample (LCS) spiking solution used for Uranium. As a result, an internal investigation was initiated.

The LCS true value in this preparatory batch was not able to be verified. It was determined that the LCS had an error, resulting in a consistently lower recovery than seen in our historical control charts.

The laboratory has reanalyzed the affected preparation batches, confirming that sample data is not otherwise affected. Reanalysis of the original spiking solution, plus analysis of replacement spiking solution has given us confidence that moving forward this issue has been resolved.

The data presented here is qualified for the low spike recovery since no re-preparation was possible due to the nature of these samples. The laboratory will provide a more detailed report of this investigation upon request.

The laboratory regrets the delay this investigation has caused; however, we are confident that the sample data provided in this report is of high quality.

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: Crow Butte Resources
Project: Marsland Baseline Crop Sampling Alfalfa 2017
Work Order: C17060308

Revised Date: 12/06/17

Report Date: 08/28/17

CASE NARRATIVE

this method for non potable waters should be viewed as inconsistent.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT

CERTIFICATIONS:

USEPA: WY00002; FL-DOH NELAC: E87641; Oregon: WY200001; Utah: WY00002216-9; Washington: C1012

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E. Lyndale Ave., Helena, MT, EPA Number MT00945.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 800.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Baseline Crop Sampling Alfalfa 2017
Lab ID: C17060308-001
Client Sample ID: Marsland Alfalfa Sample 1

Revised Date: 12/06/17
Report Date: 08/28/17
Collection Date: 06/07/17
Date Received: 06/08/17
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	1.8E-04	uCi/kg		7.2E-05	E909.0		07/28/17 14:46 / dmf
Lead 210 precision (±)	7.2E-05	uCi/kg			E909.0		07/28/17 14:46 / dmf
Lead 210 MDC	7.5E-05	uCi/kg			E909.0		07/28/17 14:46 / dmf
Polonium 210	8.9E-07	uCi/kg	U	2.0E-07	H Po-02-RC		07/03/17 14:05 / cng
Polonium 210 precision (±)	2.0E-07	uCi/kg			H Po-02-RC		07/03/17 14:05 / cng
Polonium 210 MDC	9.2E-07	uCi/kg			H Po-02-RC		07/03/17 14:05 / cng
Radium 226	1.2E-05	uCi/kg		3.1E-06	E903.0		07/11/17 12:37 / dmf
Radium 226 precision (±)	3.1E-06	uCi/kg			E903.0		07/11/17 12:37 / dmf
Radium 226 MDC	1.6E-06	uCi/kg			E903.0		07/11/17 12:37 / dmf
Thorium 230	5.2E-06	uCi/kg		9.9E-07	E908.0		12/05/17 17:25 / cng
Thorium 230 precision (±)	9.9E-07	uCi/kg			E908.0		12/05/17 17:25 / cng
Thorium 230 MDC	2.6E-06	uCi/kg			E908.0		12/05/17 17:25 / cng
Uranium	0.011	mg/kg	D	0.00072	SW6020		08/24/17 12:14 / crs
Uranium, Activity	7.3E-06	uCi/kg	D	4.9E-07	SW6020		08/24/17 12:14 / crs

**Report
Definitions:**

RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Baseline Crop Sampling Alfalfa 2017
Lab ID: C17060308-002
Client Sample ID: Marsland Alfalfa Sample 2

Revised Date: 12/06/17
Report Date: 08/28/17
Collection Date: 06/07/17
Date Received: 06/08/17
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	3.9E-04	uCi/kg		1.3E-04		E909.0	07/29/17 03:44 / dmf
Lead 210 precision (±)	1.3E-04	uCi/kg				E909.0	07/29/17 03:44 / dmf
Lead 210 MDC	7.3E-05	uCi/kg				E909.0	07/29/17 03:44 / dmf
Polonium 210	2.9E-05	uCi/kg		6.2E-06		H Po-02-RC	08/04/17 09:01 / cng
Polonium 210 precision (±)	6.2E-06	uCi/kg				H Po-02-RC	08/04/17 09:01 / cng
Polonium 210 MDC	2.3E-06	uCi/kg				H Po-02-RC	08/04/17 09:01 / cng
Radium 226	9.1E-06	uCi/kg		2.1E-06		E903.0	08/09/17 11:06 / dmf
Radium 226 precision (±)	2.1E-06	uCi/kg				E903.0	08/09/17 11:06 / dmf
Radium 226 MDC	7.7E-07	uCi/kg				E903.0	08/09/17 11:06 / dmf
Thorium 230	9.8E-06	uCi/kg		1.9E-06		E908.0	12/05/17 17:26 / cng
Thorium 230 precision (±)	1.9E-06	uCi/kg				E908.0	12/05/17 17:26 / cng
Thorium 230 MDC	9.5E-06	uCi/kg				E908.0	12/05/17 17:26 / cng
Uranium	0.018	mg/kg		0.00030		SW6020	11/30/17 14:05 / eli-h
Uranium, Activity	1.2E-05	uCi/kg		2.0E-07		SW6020	11/30/17 14:05 / eli-h

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Baseline Crop Sampling Alfalfa 2017
Lab ID: C17060308-003
Client Sample ID: Marsland Alfalfa Sample 3

Revised Date: 12/06/17
Report Date: 08/28/17
Collection Date: 06/07/17
Date Received: 06/08/17
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	2.0E-04	uCi/kg		7.0E-05		E909.0	08/10/17 11:01 / dmf
Lead 210 precision (±)	7.0E-05	uCi/kg				E909.0	08/10/17 11:01 / dmf
Lead 210 MDC	5.5E-05	uCi/kg				E909.0	08/10/17 11:01 / dmf
Polonium 210	8.7E-06	uCi/kg		1.9E-06		H Po-02-RC	08/04/17 09:00 / cng
Polonium 210 precision (±)	1.9E-06	uCi/kg				H Po-02-RC	08/04/17 09:00 / cng
Polonium 210 MDC	2.8E-06	uCi/kg				H Po-02-RC	08/04/17 09:00 / cng
Radium 226	1.3E-05	uCi/kg		2.9E-06		E903.0	08/09/17 11:07 / dmf
Radium 226 precision (±)	2.9E-06	uCi/kg				E903.0	08/09/17 11:07 / dmf
Radium 226 MDC	9.1E-07	uCi/kg				E903.0	08/09/17 11:07 / dmf
Thorium 230	5.7E-06	uCi/kg		1.1E-06		E908.0	12/05/17 17:26 / cng
Thorium 230 precision (±)	1.1E-06	uCi/kg				E908.0	12/05/17 17:26 / cng
Thorium 230 MDC	3.6E-06	uCi/kg				E908.0	12/05/17 17:26 / cng
Uranium	0.0013	mg/kg		0.00030		SW6020	11/17/17 06:19 / eli-h
Uranium, Activity	8.8E-07	uCi/kg		2.0E-07		SW6020	11/17/17 06:19 / eli-h

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Crow Butte Resources

Report Date: 12/01/17

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8	Analytical Run: ICPMS205-H_171117A								
Lab ID: ICV	Initial Calibration Verification Standard								11/16/17 22:24
Uranium	0.0572	mg/L	0.0010	95	90	110			
Lab ID: ICSA	Interference Check Sample A								11/16/17 22:25
Uranium	1.10E-05	mg/L	0.0010						
Lab ID: ICSAB	Interference Check Sample AB								11/16/17 22:27
Uranium	2.05E-06	mg/L	0.0010		0	0			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Crow Butte Resources

Report Date: 12/01/17

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: 39546
Lab ID: MB-50054	Method Blank								Run: ICPMS205-H_171117A 11/17/17 06:15
Uranium	9E-05	mg/kg	5E-05						
Lab ID: C17060308-002ADIL	Serial Dilution								Run: ICPMS205-H_171117A 11/17/17 06:18
Uranium	0.019	mg/kg	0.00098				3.7	10	
Uranium, Activity	1.3E-05	uCi/kg	6.7E-07				3.7	10	
Lab ID: C17060308-003ADIL	Serial Dilution								Run: ICPMS205-H_171117A 11/17/17 06:21
Uranium	0.025	mg/kg	0.0013					10	N
Uranium, Activity	1.7E-05	uCi/kg	8.5E-07					10	N
Lab ID: C17060308-002AMS	Sample Matrix Spike								Run: ICPMS205-H_171117A 11/17/17 06:22
Uranium	0.22	mg/kg	0.00030	104	75	125			
Lab ID: C17060308-002AMSD	Sample Matrix Spike Duplicate								Run: ICPMS205-H_171117A 11/17/17 06:24
Uranium	0.23	mg/kg	0.00030	109	75	125	4.2	20	
Lab ID: LFB-50054	Laboratory Fortified Blank								Run: ICPMS205-H_171117A 11/17/17 06:25
Uranium	0.052	mg/kg	0.00030	105	75	125			
Lab ID: C17060308-003AMS	Sample Matrix Spike								Run: ICPMS205-H_171117A 11/17/17 06:28
Uranium	0.28	mg/kg	0.00030	111	75	125			
Lab ID: C17060308-003AMSD	Sample Matrix Spike Duplicate								Run: ICPMS205-H_171117A 11/17/17 06:30
Uranium	0.28	mg/kg	0.00030	110	75	125	0.9	20	
Method: SW6020									Batch: 39546
Lab ID: MB-50054	Method Blank								Run: ICPMS205-H_171117B 11/17/17 17:55
Uranium	8E-05	mg/kg	1E-06						
Lab ID: C17060308-002AMS	Sample Matrix Spike								Run: ICPMS205-H_171117B 11/17/17 18:01
Uranium	0.40	mg/kg	0.00030	97	75	125			
Lab ID: C17060308-002AMSD	Sample Matrix Spike Duplicate								Run: ICPMS205-H_171117B 11/17/17 18:03
Uranium	0.38	mg/kg	0.00030	91	75	125	6.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Crow Butte Resources

Report Date: 12/01/17

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020	Analytical Run: ICPMS205-H_171130B								
Lab ID: ICV	Initial Calibration Verification Standard								11/30/17 13:29
Uranium	0.0574	mg/L	0.00030	96	90	110			
Method: SW6020	Batch: 39546								
Lab ID: C17060308-002AMS	Sample Matrix Spike								Run: ICPMS205-H_171130B 11/30/17 14:13
Uranium	1.1	mg/kg	0.00030	111	75	125			
Lab ID: C17060308-002AMSD	Sample Matrix Spike Duplicate								Run: ICPMS205-H_171130B 11/30/17 14:15
Uranium	1.1	mg/kg	0.00030	111	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Client: Crow Butte Resources

Report Date: 08/28/17

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Analytical Run: ICPMS4-C_170824A
Lab ID: ICV		Initial Calibration Verification Standard								08/24/17 11:18
Uranium		0.0495	mg/L	0.00030	99	90	110			
Method: E200.8										Analytical Run: SUB-H130342
Lab ID: ICV		Initial Calibration Verification Standard								11/16/17 22:24
Uranium		0.0572	mg/L	0.0010	95	90	110			
Lab ID: ICSA		Interference Check Sample A								11/16/17 22:25
Uranium		1.10E-05	mg/L	0.0010						
Lab ID: ICSAB		Interference Check Sample AB								11/16/17 22:27
Uranium		2.05E-06	mg/L	0.0010		0	0			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Revised Date: 12/06/17

Report Date: 08/28/17

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: 49965
Lab ID: C17060308-001AMS	Sample Matrix Spike			Run: G542M_170630A			07/11/17 12:37			
Radium 226		8.31E-05	uCi/kg	71		70	130			
Lab ID: C17060308-001AMSD	Sample Matrix Spike Duplicate			Run: G542M_170630A			07/11/17 12:37			
Radium 226		0.000101	uCi/kg	89		70	130	20	20	
Lab ID: LCS-49965	Laboratory Control Sample			Run: G542M_170630A			07/11/17 12:37			
Radium 226		1.94E-05	uCi/kg	93		80	120			
Lab ID: MB-49965	3	Method Blank		Run: G542M_170630A			07/11/17 12:37			
Radium 226		3E-07	uCi/kg							U
Radium 226 precision (±)		2E-07	uCi/kg							
Radium 226 MDC		4E-07	uCi/kg							
Method: E903.0										Batch: R225906
Lab ID: C17060308-002AMS	Sample Matrix Spike			Run: G542M-2_170802B			08/09/17 11:06			
Radium 226		0.000102	uCi/kg	76		70	130			
Lab ID: C17060308-002AMSD	Sample Matrix Spike Duplicate			Run: G542M-2_170802B			08/09/17 11:06			
Radium 226		9.99E-05	uCi/kg	74		70	130	2.3	20	
Lab ID: LCS-50054	Laboratory Control Sample			Run: G542M-2_170802B			08/09/17 11:07			
Radium 226		1.92E-05	uCi/kg	94		80	120			
Lab ID: MB-50054	3	Method Blank		Run: G542M-2_170802B			08/09/17 11:07			
Radium 226		4E-07	uCi/kg							
Radium 226 precision (±)		3E-07	uCi/kg							
Radium 226 MDC		3E-07	uCi/kg							
Lab ID: MB-50097	3	Method Blank		Run: G542M-2_170802B			08/09/17 11:07			
Radium 226		2E-07	uCi/kg							U
Radium 226 precision (±)		2E-07	uCi/kg							
Radium 226 MDC		3E-07	uCi/kg							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: 49965
Lab ID: LCS-49965	Laboratory Control Sample			Run: EGG-ORTEC_170705B			07/10/17 12:12			
Thorium 230		4.06E-05	uCi/kg	115		80	120			
Lab ID: C17060308-001AMS	Sample Matrix Spike			Run: EGG-ORTEC_170705B			07/10/17 12:12			
Thorium 230		0.000818	uCi/kg	114		70	130			
Lab ID: C17060308-001AMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_170705B			07/10/17 12:12			
Thorium 230		0.000766	uCi/kg	107		70	130	6.5	20	
Lab ID: MB-49965	3 Method Blank			Run: EGG-ORTEC_170705B			07/10/17 12:12			
Thorium 230			uCi/kg							U
Thorium 230 precision (±)		5E-07	uCi/kg							
Thorium 230 MDC		1E-06	uCi/kg							
Method: E908.0										Batch: 49965
Lab ID: LCS-49965	Laboratory Control Sample			Run: EGG-ORTEC_170705C			12/05/17 17:25			
Thorium 230		3.84E-05	uCi/kg	107		80	120			
Lab ID: C17060308-001AMS	Sample Matrix Spike			Run: EGG-ORTEC_170705C			12/05/17 17:25			
Thorium 230		0.000769	uCi/kg	106		70	130			
Lab ID: C17060308-001AMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_170705C			12/05/17 17:25			
Thorium 230		0.000727	uCi/kg	100		70	130	5.6	20	
Lab ID: MB-49965	3 Method Blank			Run: EGG-ORTEC_170705C			12/05/17 17:25			
Thorium 230		5E-07	uCi/kg							
Thorium 230 precision (±)		2E-07	uCi/kg							
Thorium 230 MDC		3E-07	uCi/kg							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



Trust our People, Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: 50054
Lab ID: LCS-50054	Laboratory Control Sample			Run: EGG-ORTEC_170803B			12/05/17 17:26			
Thorium 230		2.58E-05	uCi/kg	102		80	120			
Lab ID: MB-50054	3	Method Blank		Run: EGG-ORTEC_170803B			12/05/17 17:26			
Thorium 230		4E-07	uCi/kg							
Thorium 230 precision (±)		2E-07	uCi/kg							
Thorium 230 MDC		3E-07	uCi/kg							
Method: E908.0										Batch: 50097
Lab ID: C17060308-003AMS	Sample Matrix Spike			Run: EGG-ORTEC_170803B			12/05/17 17:26			
Thorium 230		0.000552	uCi/kg	111		70	130			
Lab ID: C17060308-003AMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_170803B			12/05/17 17:26			
Thorium 230		0.000484	uCi/kg	97		70	130	13	20	
Lab ID: MB-50097	3	Method Blank		Run: EGG-ORTEC_170803B			12/05/17 17:26			
Thorium 230		6E-07	uCi/kg							
Thorium 230 precision (±)		3E-07	uCi/kg							
Thorium 230 MDC		3E-07	uCi/kg							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: R225658
Lab ID: LCS-49956		Laboratory Control Sample								Run: TRICARB LSC_170719A 07/28/17 05:16
Lead 210		0.26	pCi/g-dry	142	80	120				S
- LCS response is outside of the acceptance range for this analysis. Since the response would bias the results high, and the sample results are below a reasonable MDC, the batch is approved.										
Lab ID: MB-49956	3	Method Blank								Run: TRICARB LSC_170719A 07/28/17 06:07
Lead 210		-0.005	pCi/g-dry							U
Lead 210 precision (±)		0.008	pCi/g-dry							
Lead 210 MDC		0.01	pCi/g-dry							
Lab ID: LCS-49965		Laboratory Control Sample								Run: TRICARB LSC_170719A 07/28/17 16:55
Lead 210		0.000299	uCi/kg	160	70	130				S
- LCS response is outside of the acceptance range for this analysis which could result in a high bias. There is no sample volume remaining for a reanalysis, therefore this batch is approved.										
Lab ID: MB-49965	3	Method Blank								Run: TRICARB LSC_170719A 07/28/17 17:43
Lead 210		-2E-06	uCi/kg							U
Lead 210 precision (±)		8E-06	uCi/kg							
Lead 210 MDC		1E-05	uCi/kg							
Lab ID: C17060923-001AMS3		Sample Matrix Spike								Run: TRICARB LSC_170719A 07/28/17 21:46
Lead 210		7.2	pCi/g-dry	61	70	130				S
Lab ID: C17060923-001AMS3		Sample Matrix Spike Duplicate								Run: TRICARB LSC_170719A 07/28/17 22:00
Lead 210		7.8	pCi/g-dry	73	70	130	8.2	20		
Lab ID: MB-50054	3	Method Blank								Run: TRICARB LSC_170719A 07/29/17 05:16
Lead 210		3E-06	uCi/kg							U
Lead 210 precision (±)		8E-06	uCi/kg							
Lead 210 MDC		1E-05	uCi/kg							
Method: E909.0										Batch: 50097
Lab ID: LCS-50097		Laboratory Control Sample								Run: TRICARB LSC_170731B 08/10/17 03:59
Lead 210		3.72E-05	uCi/kg	100	70	130				
Lab ID: MB-50097	3	Method Blank								Run: TRICARB LSC_170731B 08/10/17 04:53
Lead 210		-4E-07	uCi/kg							U
Lead 210 precision (±)		1E-06	uCi/kg							
Lead 210 MDC		2E-06	uCi/kg							
Lab ID: C17060308-003AMS		Sample Matrix Spike								Run: TRICARB LSC_170731B 08/10/17 13:01
Lead 210		0.00130	uCi/kg	117	70	130				
Lab ID: C17060308-003AMSD		Sample Matrix Spike Duplicate								Run: TRICARB LSC_170731B 08/10/17 13:43
Lead 210		0.00121	uCi/kg	108	70	130	7.0	20		

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: H Po-02-RC										Batch: R224649
Lab ID: LCS-49875	Laboratory Control Sample			Run: EGG-ORTEC_170629A			07/03/17 14:05			
Polonium 210		46.4	pCi/L	106		80	120			
Lab ID: C17060051-001AMS	Sample Matrix Spike			Run: EGG-ORTEC_170629A			07/03/17 14:05			
Polonium 210		0.000141	pCi/L	133		70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD recoveries are acceptable, the response is considered to be matrix related. The batch is approved.										
Lab ID: C17060051-001AMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_170629A			07/03/17 14:05			
Polonium 210		0.000129	pCi/L	118		70	130	9.0	20	
Lab ID: MB-49875	3 Method Blank			Run: EGG-ORTEC_170629A			07/03/17 14:05			
Polonium 210		0.05	pCi/L							U
Polonium 210 MDC		0.9	pCi/L							
Polonium 210 precision (±)		0.4	pCi/L							
Method: H Po-02-RC										Batch: PO210-0665
Lab ID: LCS-50054	Laboratory Control Sample			Run: EGG-ORTEC_170801A			08/04/17 09:01			
Polonium 210		49	pCi/L	106		80	120			
Lab ID: MB-50054	3 Method Blank			Run: EGG-ORTEC_170801A			08/04/17 09:01			
Polonium 210		-0.04	pCi/L							U
Polonium 210 precision (±)		0.4	pCi/L							
Polonium 210 MDC		1	pCi/L							
Lab ID: MB-50097	3 Method Blank			Run: EGG-ORTEC_170801A			08/04/17 09:00			
Polonium 210		1	pCi/L							
Polonium 210 precision (±)		0.3	pCi/L							
Polonium 210 MDC		1	pCi/L							
Lab ID: C17070849-001HMS	Sample Matrix Spike			Run: EGG-ORTEC_170801A			08/04/17 09:00			
Polonium 210		79	pCi/L	126		70	130			
Lab ID: C17070849-001HMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_170801A			08/04/17 09:01			
Polonium 210		60	pCi/L	96		70	130	27	20	R
- For all R qualified analytes the RERs are less than the limit of 2.0. This batch is approved.										

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Client: Crow Butte Resources

Report Date: 08/28/17

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 49965
Lab ID: MB-49965		Method Blank								Run: ICPMS4-C_170824A 08/24/17 12:07
Uranium		8E-05	mg/kg	3E-05						
Lab ID: LCS2-49965		Laboratory Control Sample								Run: ICPMS4-C_170824A 08/24/17 12:10
Uranium		0.048	mg/kg	0.00030	46	70	130			S
Lab ID: C17060308-001AMS		Sample Matrix Spike								Run: ICPMS4-C_170824A 08/24/17 12:17
Uranium		1.3	mg/kg	0.00072	106	75	125			
Lab ID: C17060308-001AMSD		Sample Matrix Spike Duplicate								Run: ICPMS4-C_170824A 08/24/17 12:19
Uranium		1.3	mg/kg	0.00072	104	75	125	1.9	20	
Method: SW6020										Batch: 50097
Lab ID: MB-50097		Method Blank								Run: ICPMS4-C_170824A 08/24/17 12:50
Uranium		7E-05	mg/kg	3E-05						
Lab ID: LCS2-50097		Laboratory Control Sample								Run: ICPMS4-C_170824A 08/24/17 12:53
Uranium		0.074	mg/kg	0.00030	71	70	130			
Lab ID: C17060308-003AMS		Sample Matrix Spike								Run: ICPMS4-C_170824A 08/24/17 13:00
Uranium		1.3	mg/kg	0.00074	102	75	125			
Lab ID: C17060308-003AMSD		Sample Matrix Spike Duplicate								Run: ICPMS4-C_170824A 08/24/17 13:02
Uranium		1.3	mg/kg	0.00074	102	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Work Order: C17060308

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: H_39546
Lab ID: MB-50054		Method Blank					Run: SUB-H130342			11/17/17 06:15
Uranium		9E-05	mg/kg	5E-05						
Lab ID: C17060308-002A	2	Serial Dilution					Run: SUB-H130342			11/17/17 06:18
Uranium		0.019	mg/kg	0.00098				3.7	10	
Uranium, Activity		1.3E-05	uCi/kg	6.7E-07				3.7	10	
Lab ID: C17060308-003A	2	Serial Dilution					Run: SUB-H130342			11/17/17 06:21
Uranium		0.025	mg/kg	0.0013					10	N
Uranium, Activity		1.7E-05	uCi/kg	8.5E-07					10	N
Lab ID: C17060308-002A		Sample Matrix Spike					Run: SUB-H130342			11/17/17 06:22
Uranium		0.22	mg/kg	0.00030	104	75	125			
Lab ID: C17060308-002A		Sample Matrix Spike Duplicate					Run: SUB-H130342			11/17/17 06:24
Uranium		0.23	mg/kg	0.00030	109	75	125	4.2	20	
Lab ID: LFB-50054		Laboratory Fortified Blank					Run: SUB-H130342			11/17/17 06:25
Uranium		0.052	mg/kg	0.00030	105	75	125			
Lab ID: C17060308-003A		Sample Matrix Spike					Run: SUB-H130342			11/17/17 06:28
Uranium		0.28	mg/kg	0.00030	111	75	125			
Lab ID: C17060308-003A		Sample Matrix Spike Duplicate					Run: SUB-H130342			11/17/17 06:30
Uranium		0.28	mg/kg	0.00030	110	75	125	0.9	20	
Method: SW6020										Batch: H_39546
Lab ID: MB-50054		Method Blank					Run: SUB-H130347			11/17/17 17:55
Uranium		8E-05	mg/kg	1E-06						
Lab ID: C17060308-002A		Sample Matrix Spike					Run: SUB-H130347			11/17/17 18:01
Uranium		0.40	mg/kg	0.00030	97	75	125			
Lab ID: C17060308-002A		Sample Matrix Spike Duplicate					Run: SUB-H130347			11/17/17 18:03
Uranium		0.38	mg/kg	0.00030	91	75	125	6.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 12/06/17

Report Date: 08/28/17

Work Order: C17060308

Client: Crow Butte Resources

Project: Marsland Baseline Crop Sampling Alfalfa 2017

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: SUB-H130643	
Lab ID: ICV		Initial Calibration Verification Standard								11/30/17 13:29
Uranium		0.0574	mg/L	0.00030	96	90	110			
Method: SW6020									Batch: H_39546	
Lab ID: C17060308-002A		Sample Matrix Spike								11/30/17 14:13
Uranium		1.1	mg/kg	0.00030	111	75	125			
Lab ID: C17060308-002A		Sample Matrix Spike Duplicate								11/30/17 14:15
Uranium		1.1	mg/kg	0.00030	111	75	125	0.2	20	
Lab ID: MB-50349		Method Blank								11/30/17 13:50
Uranium		0.0004	mg/kg	1E-06						
Lab ID: LCS2-50349		Laboratory Control Sample								11/30/17 13:58
Uranium		0.11	mg/kg	0.00030	100	70	130			
Lab ID: C17080796-003A		Sample Matrix Spike								11/30/17 14:09
Uranium		8.5	mg/kg	0.00030		75	125			A
Lab ID: C17080796-003A		Sample Matrix Spike Duplicate								11/30/17 14:11
Uranium		8.5	mg/kg	0.00030		75	125	0.6	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

Work Order Receipt Checklist

Crow Butte Resources

C17060308

Login completed by: Corinne Wagner

Date Received: 6/8/2017

Reviewed by: Kasey Vidick

Received by: kmk

Reviewed Date: 6/14/2017

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>
Container/Temp Blank temperature:	24.4°C No Ice		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

PLEASE PRINT- Provide as much information as possible.

Company Name: Crow Butte Resources, Inc.			Project Name: Marsland baseline crop sampling- Alfalfa 2017				Sample Origin: State: NE		EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																																					
Report Mail Address: P.O. Box 169 Crawford, NE 69339			Contact Name: Larry Teahon		Phone/Fax: 308-685-2341		Email: daxmyrus@msn.com		Sampler: (Please Print) Brooke Bass																																																																					
Invoice Address: P.O. Box 169 Crawford, NE 69339			Invoice Contact & Phone: Larry Teahon 308-685-2215 ext 114				Purchase Order: 1125		Quote/Bottle Order:																																																																					
Special Report/Formats – ELI must be notified prior to sample submittal for the following: <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> GSA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC			Number of Containers: Sample Type: A W S V B O Air Water Soils/Solids Vegetation Bioassay Other		ANALYSIS REQUESTED Th230, Pb210, Ra226, Po210, U-235, U-238, Pu-239, Pu-240, Pu-241, Pu-242, Pu-244, Pu-246, Pu-248, Pu-250, Pu-252, Pu-254, Pu-256, Pu-258, Pu-260, Pu-262, Pu-264, Pu-266, Pu-268, Pu-270, Pu-272, Pu-274, Pu-276, Pu-278, Pu-280, Pu-282, Pu-284, Pu-286, Pu-288, Pu-290, Pu-292, Pu-294, Pu-296, Pu-298, Pu-300, Pu-302, Pu-304, Pu-306, Pu-308, Pu-310, Pu-312, Pu-314, Pu-316, Pu-318, Pu-320, Pu-322, Pu-324, Pu-326, Pu-328, Pu-330, Pu-332, Pu-334, Pu-336, Pu-338, Pu-340, Pu-342, Pu-344, Pu-346, Pu-348, Pu-350, Pu-352, Pu-354, Pu-356, Pu-358, Pu-360, Pu-362, Pu-364, Pu-366, Pu-368, Pu-370, Pu-372, Pu-374, Pu-376, Pu-378, Pu-380, Pu-382, Pu-384, Pu-386, Pu-388, Pu-390, Pu-392, Pu-394, Pu-396, Pu-398, Pu-400, Pu-402, Pu-404, Pu-406, Pu-408, Pu-410, Pu-412, Pu-414, Pu-416, Pu-418, Pu-420, Pu-422, Pu-424, Pu-426, Pu-428, Pu-430, Pu-432, Pu-434, Pu-436, Pu-438, Pu-440, Pu-442, Pu-444, Pu-446, Pu-448, Pu-450, Pu-452, Pu-454, Pu-456, Pu-458, Pu-460, Pu-462, Pu-464, Pu-466, Pu-468, Pu-470, Pu-472, Pu-474, Pu-476, Pu-478, Pu-480, Pu-482, Pu-484, Pu-486, Pu-488, Pu-490, Pu-492, Pu-494, Pu-496, Pu-498, Pu-500, Pu-502, Pu-504, Pu-506, Pu-508, Pu-510, Pu-512, Pu-514, Pu-516, Pu-518, Pu-520, Pu-522, Pu-524, Pu-526, Pu-528, Pu-530, Pu-532, Pu-534, Pu-536, Pu-538, Pu-540, Pu-542, Pu-544, Pu-546, Pu-548, Pu-550, Pu-552, Pu-554, Pu-556, Pu-558, Pu-560, Pu-562, Pu-564, Pu-566, Pu-568, Pu-570, Pu-572, Pu-574, Pu-576, Pu-578, Pu-580, Pu-582, Pu-584, Pu-586, Pu-588, Pu-590, Pu-592, Pu-594, Pu-596, Pu-598, Pu-600, Pu-602, Pu-604, Pu-606, Pu-608, Pu-610, Pu-612, Pu-614, Pu-616, Pu-618, Pu-620, Pu-622, Pu-624, Pu-626, Pu-628, Pu-630, Pu-632, Pu-634, Pu-636, Pu-638, Pu-640, Pu-642, Pu-644, Pu-646, Pu-648, Pu-650, Pu-652, Pu-654, Pu-656, Pu-658, Pu-660, Pu-662, Pu-664, Pu-666, Pu-668, Pu-670, Pu-672, Pu-674, Pu-676, Pu-678, Pu-680, Pu-682, Pu-684, Pu-686, Pu-688, Pu-690, Pu-692, Pu-694, Pu-696, Pu-698, Pu-700, Pu-702, Pu-704, Pu-706, Pu-708, Pu-710, Pu-712, Pu-714, Pu-716, Pu-718, Pu-720, Pu-722, Pu-724, Pu-726, Pu-728, Pu-730, Pu-732, Pu-734, Pu-736, Pu-738, Pu-740, Pu-742, Pu-744, Pu-746, Pu-748, Pu-750, Pu-752, Pu-754, Pu-756, Pu-758, Pu-760, Pu-762, Pu-764, Pu-766, Pu-768, Pu-770, Pu-772, Pu-774, Pu-776, Pu-778, Pu-780, Pu-782, Pu-784, Pu-786, Pu-788, Pu-790, Pu-792, Pu-794, Pu-796, Pu-798, Pu-800, Pu-802, Pu-804, Pu-806, Pu-808, Pu-810, Pu-812, Pu-814, Pu-816, Pu-818, Pu-820, Pu-822, Pu-824, Pu-826, Pu-828, Pu-830, Pu-832, Pu-834, Pu-836, Pu-838, Pu-840, Pu-842, Pu-844, Pu-846, Pu-848, Pu-850, Pu-852, Pu-854, Pu-856, Pu-858, Pu-860, Pu-862, Pu-864, Pu-866, Pu-868, Pu-870, Pu-872, Pu-874, Pu-876, Pu-878, Pu-880, Pu-882, Pu-884, Pu-886, Pu-888, Pu-890, Pu-892, Pu-894, Pu-896, Pu-898, Pu-900, Pu-902, Pu-904, Pu-906, Pu-908, Pu-910, Pu-912, Pu-914, Pu-916, Pu-918, Pu-920, Pu-922, Pu-924, Pu-926, Pu-928, Pu-930, Pu-932, Pu-934, Pu-936, Pu-938, Pu-940, Pu-942, Pu-944, Pu-946, Pu-948, Pu-950, Pu-952, Pu-954, Pu-956, Pu-958, Pu-960, Pu-962, Pu-964, Pu-966, Pu-968, Pu-970, Pu-972, Pu-974, Pu-976, Pu-978, Pu-980, Pu-982, Pu-984, Pu-986, Pu-988, Pu-990, Pu-992, Pu-994, Pu-996, Pu-998, Pu-1000				SEE ATTACHED Normal Turnaround (TAT)		RUSH Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page Comments: Analyze and report as per Reg Guide 4.14 standards. Report as microcuries/kg. U-235 - 2x10 ⁻⁷ dCi/kg Th-230 - 2x10 ⁻⁷ dCi/kg Ra-226 - 5x10 ⁻⁷ dCi/kg Pb-210 - 1x10 ⁻⁶ dCi/kg Po-210 - 1x10 ⁻⁶ dCi/kg		Shipped by: <u>Hand</u> Cooler ID#: <u>Cao pin</u> Receipt Temp: <u>24.4</u> °C On Ice: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Custody Seal Y N Intact Y N Signature Y N Match Y N																																																																	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX	Th230	Pb210	Ra226	Po210	U-235	U-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Pu-246	Pu-248	Pu-250	Pu-252	Pu-254	Pu-256	Pu-258	Pu-260	Pu-262	Pu-264	Pu-266	Pu-268	Pu-270	Pu-272	Pu-274	Pu-276	Pu-278	Pu-280	Pu-282	Pu-284	Pu-286	Pu-288	Pu-290	Pu-292	Pu-294	Pu-296	Pu-298	Pu-300	Pu-302	Pu-304	Pu-306	Pu-308	Pu-310	Pu-312	Pu-314	Pu-316	Pu-318	Pu-320	Pu-322	Pu-324	Pu-326	Pu-328	Pu-330	Pu-332	Pu-334	Pu-336	Pu-338	Pu-340	Pu-342	Pu-344	Pu-346	Pu-348	Pu-350	Pu-352	Pu-354	Pu-356	Pu-358	Pu-360	Pu-362	Pu-364	Pu-366	Pu-368	Pu-370</

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.



Inter-Mountain Labs

Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 2 of 4

All shaded fields must be completed.

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

#WEB

Client Name Cameco Resources, Crow Butte		Project Identification Marsland 15 cm Soil Samples		Sampler (Signature/Attestation of Authenticity)		Telephone # 308-665-2215x117			
Report Address PO Box 169 Crawford, Ne 69339		Contact Name Walt Nelson		ANALYSES / PARAMETERS					
Invoice Address		Email Walter.Nelson@cameco.com							
		Phone 308-665-2215x117							
Same		Purchase Order #		Quote #		REMARKS			

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	As-226	U-nat	Th-230	Pb-210						
1	015	09/19/17		W-900	SL	1	x									Detection limits per Reg.
2	016	09/22/17		W-1200	SL	1	x									Guide 4.14 standards for
3	017	09/22/17		W-1500	SL	1	x									preoperational soil
4	018	09/18/17		E-300	SL	1	x									sampling.
5	019	09/18/17		E-600	SL	1	x									
6	020	09/18/17		E-900	SL	1	x									
7	021	09/18/17		E-1200	SL	1	x									
8	022	09/18/17		E-1500	SL	1	x									
9	023	09/18/17		NE-300	SL	1	x									
10	024	09/19/17		NE-600	SL	1	x									
11	025	09/19/17		NE-900	SL	1	x									
12	026	09/19/17		NE-1200	SL	1	x	x	x	x						
13	027	09/19/17		NE-1500	SL	1	x									
14	028	09/19/17		SE-300	SL	1	x									

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
13.6	<i>Walter D. Nelson</i>	10/11/17	10:30am	<i>Action Corp</i>	10/11/17	10:30am
	<i>Walter D. Nelson</i>			<i>Kathy Boyd</i>	10-12-17	11:56

SHIPPING INFO		MATRIX CODES		TURN AROUND TIMES		COMPLIANCE INFORMATION		ADDITIONAL REMARKS	
<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	



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

CHAIN OF CUSTODY RECORD

Page 3 of 4

All shaded fields must be completed.

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

#WEB

Client Name Cameco Resources, Crow Butte		Project Identification Marsland 15 cm Soil Samples		Sampler (Signature/Attestation of Authenticity)		Telephone # 308-665-2215x117			
Report Address PO Box 169 Crawford, Ne 69339		Contact Name Walt Nelson		ANALYSES / PARAMETERS					
Invoice Address		Email Walter.Nelson@cameco.com							
		Phone 308-665-2215x117							
Same		Purchase Order #		Quote #		REMARKS			

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	Pb-226	U-rat	Tl-230	Pb-210					
1	031	09/19/17		SE-600	SL	1	x								Detection limits per Reg.
2	030	09/19/17		SE-900	SL	1	x								Guide 4.14 standards for
3	031	09/19/17		SE-900 DUP	SL	1	x								preoperational soil
4	032	09/19/17		SE-1200	SL	1	x								sampling.
5	033	09/19/17		SE-1500	SL	1	x								
6	034	09/19/17		NW-300	SL	1	x								
7	035	09/19/17		NW-600	SL	1	x								
8	036	09/19/17		NW-900	SL	1	x	x	x	x					
9	037	09/22/17		NW-1200	SL	1	x								
10	038	09/22/17		NW-1500	SL	1	x								
11	039	09/19/17		SW-300	SL	1	x	x	x	x					
12	040	09/19/17		SW-600	SL	1	x								
13	041	09/22/17		SW-900	SL	1	x								
14	042	09/22/17		SW-1200	SL	1	x	x	x	x					

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
13.6	Walter D. Nelson	09/17	10:30am	Antonia Gargano	10/1/17	10:30am
				Bethy Boyce	10-12-17	11:56

SHIPPING INFO		MATRIX CODES		TURN AROUND TIMES		COMPLIANCE INFORMATION		ADDITIONAL REMARKS	
<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 checked="" type="checkbox"/> RUSH - 5 Working Days			PWSID / Permit #			
<input type="checkbox"/> Hand Carried	Filter	FT	<input checked="" 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	



Inter-Mountain Labs

Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 4 of 4

All shaded fields must be completed.

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

#WEB

Client Name Cameco Resources, Crow Butte		Project Identification Marland 15 cm Soil Samples		Sampler (Signature/Attestation of Authenticity)		Telephone # 308-665-2215x117												
Report Address PO Box 169 Crawford, Ne 69339		Contact Name Walt Nelson		Email Walter_Nelson@cameco.com		Phone 308-665-2215x117												
Invoice Address Same		Purchase Order #		Quote #		ANALYSES / PARAMETERS												
						REMARKS												
ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	Ra-226	U-rat	Th-230	Pb-210								
1	SIF10232-043	09/22/17		SW-1500	SL	1	x											Detection limits per Reg.
2																		Guide 4.14 standards for
3																		preoperational soil
4																		sampling.
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
LAB COMMENTS		Relinquished By (Signature/Printed)		DATE	TIME	Received By (Signature/Printed)		DATE	TIME									
13/6		<i>Walter D. Nelson</i>		10/1/17	10:30am	<i>Action Corp</i>		10/1/17	10:30am									
		<i>Walter D. Nelson</i>				<i>Kathy Ray</i>		10-12-17	11:54									
SHIPPING INFO		MATRIX CODES		TURN AROUND TIMES		COMPLIANCE INFORMATION		ADDITIONAL REMARKS										
<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 <input checked="" type="checkbox"/> Client <input type="checkbox"/>												



Date: 1/15/2018

CLIENT: Cameco Resources, Crow Butte Operation
Project: Marsland 15cm Soil Samples
Lab Order: S1710232

CASE NARRATIVE
Report ID: S1710232001

Samples C, C-Dup, E-1200, E-1500, E-300, E-600, E-900, N-1200, N-1500, N-300, N-600, N-900, NE-1200, NE-1500, NE-300, NE-600, NE-900, NW-1200, NW-1500, NW-300, NW-600, NW-900, S-1200, S-300, S-600, S-900, S1500, SE-1200, SE-1500, SE-300, SE-600, SE-900, SE-900 DUP, SW-1200, SW-1500, SW-300, SW-600, SW-900, W-1200, W-1500, W-300, W-600 and W-900 were received on October 12, 2017.

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:

Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-001
ClientSample ID: C
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	8.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/18/2017 1203	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/18/2017 1203	MB
Thorium 230	7.0E-7	µCi/g		2.0E-7	ACW10	12/19/2017 835	MB
Thorium230 Precision (±)	2.0E-7	µCi/g			ACW10	12/19/2017 835	MB
Thorium229 Tracer (30-120)	53.7	%			ACW10	12/19/2017 835	MB
Metals - Total							
Uranium	5.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 108	MS

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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 1 of 43



Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-002
ClientSample ID: C-Dup
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	7.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/18/2017 1654	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/18/2017 1654	MB
Thorium 230	4.0E-7	µCi/g		2.0E-7	ACW10	01/10/2018 1543	MB
Thorium230 Precision (±)	2.0E-7	µCi/g			ACW10	01/10/2018 1543	MB
Thorium229 Tracer (30-120)	42.4	%			ACW10	01/10/2018 1543	MB
Metals - Total							
Uranium	5.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 125	MS

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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-003
ClientSample ID: N-300
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/18/2017 1913	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/18/2017 1913	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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-004
ClientSample ID: N-600
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/18/2017 2113	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/18/2017 2113	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-005
ClientSample ID: N-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 934 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 934 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: 

Wade Nieuwsma, Assistant Laboratory Manager

Page 5 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-006
ClientSample ID: N-1200
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	9.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1050	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1050	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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-007
ClientSample ID: N-1500
COC: WEB

Date Reported: 1/15/2018
Report ID: S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1206 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1206 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-008
ClientSample ID: S-300
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	6.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 2106	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 2106	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 8 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-009
ClientSample ID: S-600
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	6.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 835	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 835	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-010
ClientSample ID: S-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1039 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1039 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-011
ClientSample ID: S-1200
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1354	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1354	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-012
ClientSample ID: S1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	1.2E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1537 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1537 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-013
ClientSample ID: W-300
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1653	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1653	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-014
ClientSample ID: W-600
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 2312	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 2312	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-015
ClientSample ID: W-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	1.0E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 845 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 845 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 15 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-016
ClientSample ID: W-1200
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	1.1E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 1001	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 1001	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 16 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-017
ClientSample ID: W-1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	1.0E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 1117	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 1117	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 17 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-018
ClientSample ID: E-300
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	1.0E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 1244	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 1244	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-019
ClientSample ID: E-600
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 1414	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 1414	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 19 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-020
ClientSample ID: E-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	9.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 1551	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 1551	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 20 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-021
ClientSample ID: E-1200
COC: WEB

Date Reported: 1/15/2018
Report ID: S1710232001

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1234	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1234	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-022
ClientSample ID: E-1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	1.0E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1351	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1351	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-023
ClientSample ID: NE-300
COC: WEB

Date Reported: 1/15/2018
Report ID: S1710232001

WorkOrder: S1710232
CollectionDate: 9/18/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	6.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1509	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-024
ClientSample ID: NE-600
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	5.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1627 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1627 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-025
ClientSample ID: NE-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1744	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1744	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-026
ClientSample ID: NE-1200
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	7.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 1902	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 1902	MB
Thorium 230	6.0E-7	µCi/g		2.0E-7	ACW10	01/10/2018 1543	MB
Thorium 230 Precision (±)	6.0E-7	µCi/g			ACW10	01/10/2018 1543	MB
Thorium 229 Tracer (30-120)	42.4	%			ACW10	01/10/2018 1543	MB
Metals - Total							
Uranium	3.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 131	MS

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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 26 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-027
ClientSample ID: NE-1500
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001
WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 2019 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 2019 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 27 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-028
ClientSample ID: SE-300
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 2137	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 2137	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 28 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-029
ClientSample ID: SE-600
COC: WEB

Date Reported: 1/15/2018
Report ID: S1710232001
WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/19/2017 2254 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/19/2017 2254 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 29 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported: 1/15/2018
Report ID: S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-030
ClientSample ID: SE-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	4.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 012	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-031
ClientSample ID: SE-900 DUP
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	5.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 247 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 247 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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-032
ClientSample ID: SE-1200
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	6.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 405 MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 405 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager

Page 32 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-033
ClientSample ID: SE-1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 522	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 522	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-034
ClientSample ID: NW-300
COC: WEB

Date Reported: 1/15/2018
Report ID: S1710232001
WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 640 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 640 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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-035
ClientSample ID: NW-600
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	7.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 757	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 757	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	G Analyzed at IML Gillette laboratory
	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	U Analysis reported under the reporting limit
	X Matrix Effect	

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 35 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-036
ClientSample ID: NW-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	6.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	5.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 914	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 914	MB
Thorium 230	4.0E-7	µCi/g		2.0E-7	ACW10	01/10/2018 1543	MB
Thorium230 Precision (±)	2.0E-7	µCi/g			ACW10	01/10/2018 1543	MB
Thorium229 Tracer (30-120)	44.0	%			ACW10	01/10/2018 1543	MB
Metals - Total							
Uranium	3.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 137	MS

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	G Analyzed at IML Gillette laboratory
	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	U Analysis reported under the reporting limit
	X Matrix Effect	

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-037
ClientSample ID: NW-1200
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001
WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	5.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1032	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1032	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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

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 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-038
ClientSample ID: NVV-1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	4.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1149	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1149	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: 

Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-039
ClientSample ID: SW-300
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	4.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	6.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1307	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1307	MB
Thorium 230	2.0E-7	µCi/g		2.0E-7	ACW10	01/10/2018 2310	MB
Thorium230 Precision (±)	2.0E-7	µCi/g			ACW10	01/10/2018 2310	MB
Thorium229 Tracer (30-120)	43.5	%			ACW10	01/10/2018 2310	MB
Metals - Total							
Uranium	3.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 143	MS

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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-040
ClientSample ID: SW-600
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/19/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 1424	MB
Radium 226 Precision (±)	1.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 1424	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 40 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-041
ClientSample ID: SW-900
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Radium 226	8.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/20/2017 2315	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/20/2017 2315	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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Sample Analysis Report

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

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-042
ClientSample ID: SW-1200
COC: WEB

Date Reported 1/15/2018
Report ID S1710232001

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Radionuclides - Total							
Lead 210	8.0E-7	µCi/g		2.0E-7	OTW01	11/21/2017 1145	MB
Lead 210 Precision (±)	1.0E-7	µCi/g			OTW01	11/21/2017 1145	MB
Radium 226	1.0E-6	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 032	MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 032	MB
Thorium 230	5.0E-7	µCi/g		2.0E-7	ACW10	01/10/2018 2310	MB
Thorium230 Precision (±)	5.0E-7	µCi/g			ACW10	01/10/2018 2310	MB
Thorium229 Tracer (30-120)	52.1	%			ACW10	01/10/2018 2310	MB
Metals - Total							
Uranium	6.0E-7	µCi/g		2.0E-7	EPA 200.8	11/07/2017 148	MS

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	G	Analyzed at IML Gillette laboratory
	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	U	Analysis reported under the reporting limit
	X	Matrix Effect		

Reviewed by: Wade Nieuwsma
Wade Nieuwsma, Assistant Laboratory Manager



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Sample Analysis Report

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

Date Reported 1/15/2018
Report ID S1710232001

ProjectName: Marsland 15cm Soil Samples
Lab ID: S1710232-043
ClientSample ID: SW-1500
COC: WEB

WorkOrder: S1710232
CollectionDate: 9/22/2017
DateReceived: 10/12/2017 11:56:00 AM
FieldSampler:
Matrix: Sediment

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init
Radionuclides - Total						
Radium 226	9.0E-7	µCi/g		2.0E-7	EPA 901.1 Mod.	11/21/2017 150 MB
Radium 226 Precision (±)	2.0E-7	µCi/g			EPA 901.1 Mod.	11/21/2017 150 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
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
X Matrix Effect

C Calculated Value
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
M Value exceeds Monthly Ave or MCL or is less than LCL
O Outside the Range of Dilutions
U Analysis reported under the reporting limit

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager

Page 43 of 43



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

ANALYTICAL QC SUMMARY REPORT

CLIENT: Cameco Resources, Crow Butte Operation
Work Order: S1710232
Project: Marsland 15cm Soil Samples

Date: 1/15/2018
Report ID: S1710232001

Lead 210 in Soil		Sample Type MBLK		Units: pCi/g			
MB-648 (11/21/17 09:31)		RunNo: 152522		PrepDate: 11/06/17 0:00		BatchID R152522	
Analyte		Result	RL	Spike	Ref Samp	%REC	% Rec Limits Qual
Lead 210		ND	1				
Lead 210 in Soil		Sample Type LCS		Units: pCi/g			
LCS-648 (11/21/17 09:31)		RunNo: 152522		PrepDate: 11/06/17 0:00		BatchID R152522	
Analyte		Result	RL	Spike	Ref Samp	%REC	% Rec Limits Qual
Lead 210		14	1	13.2		108	50 - 147
Lead 210 in Soil		Sample Type MS		Units: pCi/g			
MS-648 (11/21/17 09:31)		RunNo: 152522		PrepDate: 11/06/17 0:00		BatchID R152522	
Analyte		Result	RL	Spike	Ref Samp	%REC	% Rec Limits Qual
Lead 210		12	1	12.2	ND	94.0	80 - 143
Lead 210 in Soil		Sample Type MSD		Units: pCi/g			
MSD-648 (11/21/17 09:31)		RunNo: 152522		PrepDate: 11/06/17 0:00		BatchID R152522	
Analyte		Result	RL	Conc	%RPD	%REC	% RPD Limits Qual
Lead 210		12	1	12	0.804	94.8	20

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	G	Analyzed at IML Gillette laboratory	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		



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

ANALYTICAL QC SUMMARY REPORT**CLIENT:** Cameco Resources, Crow Butte Operation**Date:** 1/15/2018**Work Order:** S1710232**Report ID:** S1710232001**Project:** Marsland 15cm Soil Samples**Radium By Gamma Spectroscopy in Soil**Sample Type **MBLK**Units: **pCi/g**

MB-13917 (11/18/17 08:32)	RunNo: 152251	PrepDate: 10/27/17 10:45	BatchID 13917					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 ND 0.2

MB-13919 (11/19/17 09:59)	RunNo: 152254	PrepDate: 11/24/17 14:03	BatchID 13919					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 ND 0.2

Radium By Gamma Spectroscopy in SoilSample Type **LCS**Units: **pCi/g**

LCS-13917 (11/18/17 10:43)	RunNo: 152251	PrepDate: 10/27/17 10:45	BatchID 13917					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 37.0 0.2 37.9 97.5 70 - 130

LCS-13919 (11/19/17 11:16)	RunNo: 152254	PrepDate: 11/24/17 14:03	BatchID 13919					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	

Radium 226 34.2 0.2 37.9 90.3 70 - 130

Radium By Gamma Spectroscopy in SoilSample Type **DUP**Units: **pCi/g**

S1710232-010AD (11/20/17 12:00)	RunNo: 152251	PrepDate: 10/27/17 10:45	BatchID 13917					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Radium 226 0.9 0.2 0.8 12.6 30

S1710232-020AD (11/21/17 17:08)	RunNo: 152251	PrepDate: 10/27/17 10:45	BatchID 13917					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Radium 226 0.7 0.2 0.9 32.6 30

S1710232-030AD (11/20/17 01:29)	RunNo: 152254	PrepDate: 10/27/17 11:40	BatchID 13919					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Radium 226 0.6 0.2 0.4 30.7 30

S1710232-040AD (11/20/17 15:41)	RunNo: 152254	PrepDate: 10/27/17 11:40	BatchID 13919					
Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	

Radium 226 0.8 0.2 0.8 6.39 30

Qualifiers:

B Analyte detected in the associated Method Blank
 G Analyzed at IML Gillette laboratory
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits
 X Matrix Effect

E Value above quantitation range
 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



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

ANALYTICAL QC SUMMARY REPORT

CLIENT: Cameco Resources, Crow Butte Operation
Work Order: S1710232
Project: Marsland 15cm Soil Samples

Date: 1/15/2018
Report ID: S1710232001

Thorium 230 in Soil		Sample Type	MBLK	Units: pCi/g				
MB-576 (12/18/17 17:09)	RunNo: 153042	PrepDate: 11/28/17 0:00	BatchID R153042					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Thorium230	ND	0.2						
MB-576 (12/19/17 08:35)	RunNo: 153042	PrepDate: 11/28/17 0:00	BatchID R153042					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Thorium230	ND	0.2						
MB-577 (01/10/18 15:43)	RunNo: 153678	PrepDate: 12/11/17 0:00	BatchID R153678					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Thorium230	ND	0.2						
Thorium 230 in Soil		Sample Type	LCS	Units: pCi/g				
LCS-576 (12/18/17 17:09)	RunNo: 153042	PrepDate: 11/28/17 0:00	BatchID R153042					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Thorium230	13.7	0.2	12.5		110	68 - 146		
LCS-577 (01/10/18 08:52)	RunNo: 153678	PrepDate: 12/11/17 0:00	BatchID R153678					
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Thorium230	13.3	0.2	12.5		107	68 - 146		
Thorium 230 in Soil		Sample Type	LCSD	Units: pCi/g				
LCSD-576 (12/18/17 17:10)	RunNo: 153042	PrepDate: 11/28/17 0:00	BatchID R153042					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Thorium230	12.6	0.2	13.7	8.62	101	20		
LCSD-577 (01/10/18 08:52)	RunNo: 153678	PrepDate: 12/11/17 0:00	BatchID R153678					
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Thorium230	11.6	0.2	13.3	13.8	92.8	20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- G Analyzed at IML Gillette laboratory
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- X Matrix Effect

- E Value above quantitation range
- 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



Inter-Mountain Labs

Your Environmental Monitoring Partner

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

ANALYTICAL QC SUMMARY REPORT

CLIENT: Cameco Resources, Crow Butte Operation
Work Order: S1710232
Project: Marsland 15cm Soil Samples

Date: 1/15/2018
Report ID: S1710232001

Total (3050) Metals by EPA 200.8 - SoilSample Type **MBLK**

Units: pCi/g

MBLK (11/07/17 06:45)	RunNo: 151757							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Uranium	ND	0.2						

Total (3050) Metals by EPA 200.8 - SoilSample Type **LCS**

Units: pCi/g

LCS (11/07/17 03:20)	RunNo: 151757							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Uranium	65.0	0.2	67.7		96.0	85 - 115		

Total (3050) Metals by EPA 200.8 - SoilSample Type **MS**

Units: pCi/g

S1710468-001AS (11/07/17 00:34)	RunNo: 151757							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Uranium	6430	0.2	6910	1.6	93.1	70 - 130		

S1710329-001AS (11/07/17 02:05)	RunNo: 151757							
Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
Uranium	6580	0.2	6910	2.6	95.3	70 - 130		

Total (3050) Metals by EPA 200.8 - SoilSample Type **MSD**

Units: pCi/g

S1710468-001AMSD (11/07/17 00:40)	RunNo: 151757							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Uranium	6540	0.2	6430	1.69	94.7	20		

S1710329-001AMSD (11/07/17 02:11)	RunNo: 151757							
Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual	
Uranium	6620	0.2	6580	0.499	95.8	20		

Qualifiers: B Analyte detected in the associated Method Blank
G Analyzed at IML Gillette laboratory
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
X Matrix Effect

E Value above quantitation range
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