



**WESTERN  
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**CAMECO RESOURCES**  
**SMITH RANCH-HIGHLAND OPERATION**  
**GLENROCK, WY 82637**

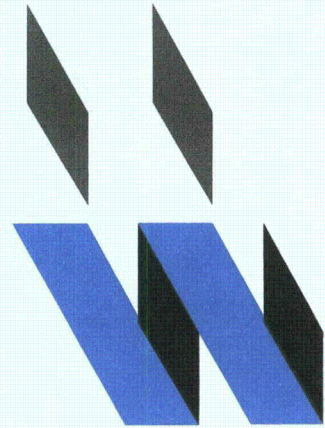
**BASELINE GAMMA RADIATION SURVEY**  
**MINE UNIT K NORTH, PROPOSED MINE UNITS 7,**  
**8, & 14**

April 2011

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## **I. Introduction**

Western Environmental Services and Testing, Inc. (WEST) of Casper, Wyoming was contracted by Cameco Resources to complete a baseline Gamma Survey on Mine Unit K North, and Proposed Mine Units 7, 8, and 14 located at the Smith Ranch-Highland Operations in Converse County, Wyoming. Mine Unit K North was designated Study Area A, while Proposed Mine Units 7, 8, and 14 were grouped together and designated Study Area B. The total survey area consisted of approximately 1,467 acres. Study Area A, covering approximately 522 acres, resided within Sections 19, 24 and 25, of Township 36 North, Range 73 and 74 West. Study Area B, covering approximately 945 acres, resided within Sections 26, 27, 34, and 35, of Township 36 North, Range 74 West.

The survey followed guidelines set forth by the Nuclear Regulatory Commission's (NRC) Regulatory Guide 4.14, Section 1.1, (NRC 1980) and NUREG-1569.

## II. Results Summary

Direct gamma radiation readings and soil samples were taken throughout the study areas at identified and logged sample points. All soil samples were analyzed for Radium 226 and ten percent of soil samples from both study areas were analyzed for natural uranium, thorium 230, and lead 210.

### Study Area A:

Direct gamma radiation readings in Study Area A ranged from 14 to 26 uR/hr with an average reading of 18.5 uR/hr (see Table 1, Map 2).

Soil samples from Study Area A at a depth of 5 cm had a Radium 226 range of 0.8 to 5.0 pCi/g-dry (see Table 2). Samples from Study Area A at a depth of 15 cm had a Radium 226 range of 0.8 to 4.9 pCi/g-dry (see Table 2).

Soil samples from Study Area A at a depth of 5 cm analyzed for natural uranium, thorium 230 and lead 210 had a range of 1.13 to 2.11 mg/kg-dry, 0.6 to 1.5 pCi/g-dry and 0.7 to 1.2 pCi/g-dry, respectively (see Table 3). Soil samples from Study Area A at a depth of 15 cm analyzed for natural uranium, thorium 230 and lead 210 had a range of 1.11 to 4.08 mg/kg-dry, 0.5 to 3.3 pCi/g-dry and 0.5 to 1.6 pCi/g-dry, respectively (see Table 3).

### Study Area B:

Direct gamma radiation readings in Study Area B ranged from 12 to 36 uR/hr with an average reading of 17 uR/hr (see Table 4, Map 4).

Soil samples from Study Area B at a depth of 5 cm had a Radium 226 range of 0.1 to 11.7 pCi/g-dry (see Table 5). Samples from Study Area B at a depth of 15 cm had a Radium 226 range of 0.4 to 6.9 pCi/g-dry (see Table 5).

Soil samples from Study Area B at a depth of 5 cm analyzed for natural uranium, thorium 230 and lead 210 had a range of 0.91 to 2.45 mg/kg-dry, 0.2 to 1.8 pCi/g-dry and 0.2 to 1.6 pCi/g-dry, respectively (see Table 6). Soil samples from Study Area B at a depth of 15 cm analyzed for natural uranium, thorium 230 and lead 210 had a range of 0.72 to 3.3 mg/kg-dry, 0.3 to 3.0 pCi/g-dry and 0.07 to 2.4 pCi/g-dry, respectively (see Table 6).

### **III. Sampling Procedures**

In accordance with the Nuclear Regulatory Commission's Regulatory Guide 4.14, Section 1.1 (NRC, 1980) and NUREG-1569, direct gamma radiation readings were taken at 150 meter intervals. Soil samples were collected at depths of 5 and 15 cm every 300 meters throughout the study areas. Survey points were determined using ESRI's ArcGIS and iGage's All Topo Maps programs. Handheld Global Positioning Systems (GPS), Garmin eTrex, units were uploaded with the survey points and used in the field to accurately sample points to within 3 meters (see Maps 1 and 3). All Terrain Utility Vehicles (ATV's) were used in the field for transportation between survey points.

Direct gamma radiation for the project was measured using Ludlum Model 19 MicroR Meters. Meters were held approximately 1 meter above ground level to determine reading. These meters were calibrated by the manufacturer. WEST field personnel performed a daily function check before and after use each day (See appendix D).

Core soil samplers and shovels were used to collect soil samples. Accurate depth for the soil sampling was determined with engravings on the core soil samplers and shovels. The core soil samplers and shovels were wiped down between each collection to ensure that cross contamination between samples did not occur. Soil samples were delivered, under strict chain-of-custody, to Cameco Resources personnel who then delivered all samples to Energy Laboratories, of Casper, Wyoming for analyses (see Appendix E).

#### IV. Results Anomalies

There was a great amount of human activity and disturbed soil in the area. Care was taken not to collect soil samples from previously disturbed locations. As a result some samples were collected from areas adjacent to the disturbed location, approximately 5-20 meters away from the designated sample point.

- Sample points 33 and 41 within Study Area A fell within areas of disturbed soil and were collected from the closest nearby area of undisturbed soil.
- Sample point 90 within Study Area B fell within an area of disturbed soil and was collected from the closest nearby area of undisturbed soil.
- Sample point 137 in Study Area B was situated within a man-made canal. This sample point was collected near the edge of the canal.
- Despite the Chain of Custody, sample A45 @ 5 cm was analyzed for all constituents (Radium 226, Total Uranium, Thorium 230, and Lead 210) instead of sample A47 @ 5 cm. A47 @ 5cm was still analyzed for Radium 226. The corresponding samples at 15 cm were analyzed correctly according to the Chain of Custody. This is a minimal oversight on the laboratory's part, since the samples designated to be analyzed for all constituents were chosen randomly to begin with.
- The laboratory reported that minimal detectable concentrations could not be achieved for the Radium 226 samples B82@5, B98@5, Lead 210 samples B8@5, B8@15, B112@15, B126@5, B126@15 and Thorium 230 samples B8@5, B8@15, B44@15, B68@5, B112@5, B112@15, B126@5 due to matrix interferences, restricting the volume of sample to be used in the analysis. See the Energy Laboratories report in Appendix C for more information.

## **APPENDICES**

- A. Maps**
- B. Tables**
- C. Analytical Data**
- D. Equipment Calibration and Function  
Checks**
- E. Chains of Custody**
- F. Resumes of Project Personnel**

## **APPENDIX A**

### **Maps**

## **Map 1: Study Area A Sample Locations**

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FIGURE,  
THAT CAN BE VIEWED AT THE  
RECORD TITLED:**

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**D-01**

**Map 2: Study Area A Direct Gamma Radiation Readings**

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GAMMA READINGS”**

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**Map 3: Study Area B Sample Location**

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**Map 4: Study Area B Direct Gamma Radiation Readings**

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GAMMA READINGS”**

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## **APPENDIX B**

### **Tables**

**Table 1: Study Area A Direct Gamma Radiation Readings**

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
A1	444650	4769500	17		4/7/2011
A2	444650	4769650	16		4/7/2011
A3	444650	4769800	17		4/7/2011
A4	444800	4769950	22		4/7/2011
A5	444800	4769800	21		4/7/2011
A6	444800	4769650	17		4/7/2011
A7	444800	4769500	17		4/7/2011
A8	444800	4768900	18		4/6/2011
A9	444800	4768750	16		4/6/2011
A10	444800	4768600	16		4/6/2011
A11	444950	4768300	16		4/6/2011
A12	444950	4768450	16		4/6/2011
A13	444950	4768600	14		4/6/2011
A14	444950	4768750	16		4/6/2011
A15	444950	4768900	18		4/6/2011
A16	444950	4769050	18		4/6/2011
A17	444950	4769200	20		4/7/2011
A18	444950	4769350	16		4/7/2011
A19	444950	4769500	16		4/7/2011
A20	444950	4769650	16		4/7/2011
A21	444950	4769800	17		4/7/2011
A22	444950	4769950	21		4/7/2011
A23	444950	4770100	18		4/7/2011
A24	445100	4770250	18		4/7/2011
A25	445100	4770100	21		4/7/2011
A26	445100	4769950	20		4/7/2011
A27	445100	4769800	20		4/7/2011
A28	445100	4769650	18		4/7/2011
A29	445100	4769500	18		4/7/2011
A30	445100	4769350	18		4/7/2011
A31	445100	4769200	18		4/7/2011
A32	445100	4769050	18		4/6/2011
A33	445100	4768900	18	Point in Topsoil, sampled nearby	4/6/2011
A34	445100	4768750	18		4/6/2011
A35	445100	4768600	16		4/6/2011
A36	445100	4768450	18		4/6/2011
A37	445250	4768450	14		4/6/2011
A38	445250	4768600	16		4/6/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
A39	445250	4768750	18		4/6/2011
A40	445250	4768900	16		4/6/2011
A41	445250	4769050	22	Point in Topsoil, sampled nearby	4/6/2011
A42	445250	4769200	22		4/7/2011
A43	445250	4769350	18		4/7/2011
A44	445250	4769500	22		4/7/2011
A45	445250	4769650	18		4/7/2011
A46	445250	4769800	22		4/7/2011
A47	445250	4769950	23		4/7/2011
A48	445250	4770100	24		4/7/2011
A49	445250	4770250	19		4/6/2011
A50	445400	4770250	20		4/6/2011
A51	445400	4770100	18		4/7/2011
A52	445400	4769950	20		4/7/2011
A53	445400	4769800	20		4/7/2011
A54	445400	4769650	18		4/7/2011
A55	445400	4769500	18		4/7/2011
A56	445400	4769350	18		4/7/2011
A57	445400	4769200	18		4/7/2011
A58	445400	4769050	18		4/6/2011
A59	445400	4768900	18		4/6/2011
A60	445400	4768750	18		4/6/2011
A61	445400	4768600	18		4/6/2011
A62	445400	4768450	14		4/6/2011
A63	445550	4768600	14		4/6/2011
A64	445550	4768750	18		4/6/2011
A65	445550	4768900	16		4/6/2011
A66	445550	4769050	20		4/6/2011
A67	445550	4769200	19		4/6/2011
A68	445550	4769350	18		4/6/2011
A69	445550	4769500	19		4/6/2011
A70	445550	4769650	17		4/6/2011
A71	445550	4769800	18		4/6/2011
A72	445550	4769950	20		4/6/2011
A73	445550	4770100	23		4/6/2011
A74	445550	4770250	20		4/6/2011
A75	445550	4770400	17		4/6/2011
A76	445700	4770250	22		4/6/2011
A77	445700	4770100	19		4/6/2011
A78	445700	4769950	19		4/6/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
A79	445700	4769800	21		4/6/2011
A80	445700	4769650	25		4/6/2011
A81	445700	4769500	17		4/6/2011
A82	445700	4769350	16		4/6/2011
A83	445700	4769200	18		4/6/2011
A84	445700	4769050	18		4/6/2011
A85	445700	4768900	16		4/6/2011
A86	445700	4768750	18		4/6/2011
A87	445850	4769350	17		4/6/2011
A88	445850	4769500	19		4/6/2011
A89	445850	4769650	18		4/6/2011
A90	445850	4769800	22		4/6/2011
A91	445850	4769950	20		4/6/2011
A92	445850	4770100	26		4/6/2011
A93	446000	4769950	18		4/6/2011
A94	446000	4769800	19		4/6/2011

**Table 2: Study Area A Soil Sample Radium 226 Results**

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
A2 @ 5	4/7/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
A2 @ 15	4/7/2011	E901.1	Radium 226	3.0	0.3	pCi/g-dry
A5 @ 5	4/7/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
A5 @ 15	4/7/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
A7 @ 5	4/7/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A7 @ 15	4/7/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A8 @ 5	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A8 @ 15	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
A10 @ 5	4/6/2011	E901.1	Radium 226	2.2	0.3	pCi/g-dry
A10 @ 15	4/6/2011	E901.1	Radium 226	2.2	0.3	pCi/g-dry
A12 @ 5	4/6/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A12 @ 15	4/6/2011	E901.1	Radium 226	1.0	0.3	pCi/g-dry
A14 @ 5	4/6/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
A14 @ 15	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A16 @ 5	4/6/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
A16 @ 15	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A18 @ 5	4/7/2011	E901.1	Radium 226	2.8	0.3	pCi/g-dry
A18 @ 15	4/7/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
A20 @ 5	4/7/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A20 @ 15	4/7/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
A22 @ 5	4/7/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A22 @ 15	4/7/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A25 @ 5	4/7/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A25 @ 15	4/7/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A27 @ 5	4/7/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A27 @ 15	4/7/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A29 @ 5	4/7/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
A29 @ 15	4/7/2011	E901.1	Radium 226	2.2	0.3	pCi/g-dry
A31 @ 5	4/7/2011	E901.1	Radium 226	2.4	0.3	pCi/g-dry
A31 @ 15	4/7/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A33 @ 5	4/6/2011	E901.1	Radium 226	2.4	0.3	pCi/g-dry
A33 @ 15	4/6/2011	E901.1	Radium 226	2.7	0.3	pCi/g-dry
A35 @ 5	4/6/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A35 @ 15	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A37 @ 5	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
A37 @ 15	4/6/2011	E901.1	Radium 226	1.0	0.3	pCi/g-dry
A39 @ 5	4/6/2011	E901.1	Radium 226	2.5	0.3	pCi/g-dry
A39 @ 15	4/6/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A41 @ 5	4/6/2011	E901.1	Radium 226	3.0	0.3	pCi/g-dry
A41 @ 15	4/6/2011	E901.1	Radium 226	2.7	0.3	pCi/g-dry
A43 @ 5	4/7/2011	E901.1	Radium 226	2.4	0.3	pCi/g-dry
A43 @ 15	4/7/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
A45 @ 5	4/7/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
A45 @ 15	4/7/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A47 @ 5	4/7/2011	E901.1	Radium 226	3.5	0.3	pCi/g-dry
A47 @ 15	4/7/2011	E901.1	Radium 226	4.9	0.3	pCi/g-dry
A49 @ 5	4/6/2011	E901.1	Radium 226	3.2	0.3	pCi/g-dry
A49 @ 15	4/6/2011	E901.1	Radium 226	2.5	0.3	pCi/g-dry
A51 @ 5	4/7/2011	E901.1	Radium 226	2.3	0.3	pCi/g-dry
A51 @ 15	4/7/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
A53 @ 5	4/7/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A53 @ 15	4/7/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
A55 @ 5	4/7/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A55 @ 15	4/7/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A57 @ 5	4/7/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A57 @ 15	4/7/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
A59 @ 5	4/6/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
A59 @ 15	4/6/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
A61 @ 5	4/6/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
A61 @ 15	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
A64 @ 5	4/6/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
A64 @ 15	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A66 @ 5	4/6/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A66 @ 15	4/6/2011	E901.1	Radium 226	2.2	0.3	pCi/g-dry
A68 @ 5	4/6/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A68 @ 15	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A70 @ 5	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
A70 @ 15	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
A72 @ 5	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A72 @ 15	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A74 @ 5	4/6/2011	E901.1	Radium 226	3.5	0.3	pCi/g-dry
A74 @ 15	4/6/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A77 @ 5	4/6/2011	E901.1	Radium 226	2.3	0.3	pCi/g-dry
A77 @ 15	4/6/2011	E901.1	Radium 226	2.3	0.3	pCi/g-dry
A79 @ 5	4/6/2011	E901.1	Radium 226	5.0	0.3	pCi/g-dry
A79 @ 15	4/6/2011	E901.1	Radium 226	3.8	0.3	pCi/g-dry
A81 @ 5	4/6/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
A81 @ 15	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A83 @ 5	4/6/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry
A83 @ 15	4/6/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
A85 @ 5	4/6/2011	E901.1	Radium 226	2.5	0.3	pCi/g-dry
A85 @ 15	4/6/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
A87 @ 5	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
A87 @ 15	4/6/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A89 @ 5	4/6/2011	E901.1	Radium 226	2.4	0.3	pCi/g-dry
A89 @ 15	4/6/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
A91 @ 5	4/6/2011	E901.1	Radium 226	2.9	0.3	pCi/g-dry
A91 @ 15	4/6/2011	E901.1	Radium 226	2.8	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
A94 @ 5	4/6/2011	E901.1	Radium 226	2.6	0.3	pCi/g-dry
A94 @ 15	4/6/2011	E901.1	Radium 226	2.0	0.3	pCi/g-dry

B00006

**Table 3: Study Area A Soil Samples Tested for Total Uranium,  
Thorium 230 and Lead 210**

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
A7 @ 5	4/7/2011	E909.0	Lead 210	1.2	-1000	pCi/g-dry
A7 @ 5	4/7/2011	E908.0	Thorium 230	0.8	-1000	pCi/g-dry
A7 @ 5	4/7/2011	SW6020	Uranium	1.13	0.02	mg/kg-dry
A7 @ 15	4/7/2011	E909.0	Lead 210	0.5	-1000	pCi/g-dry
A7 @ 15	4/7/2011	E908.0	Thorium 230	0.5	-1000	pCi/g-dry
A7 @ 15	4/7/2011	SW6020	Uranium	1.11	0.02	mg/kg-dry
A31 @ 5	4/7/2011	E909.0	Lead 210	0.9	-1000	pCi/g-dry
A31 @ 5	4/7/2011	E908.0	Thorium 230	0.9	-1000	pCi/g-dry
A31 @ 5	4/7/2011	SW6020	Uranium	1.54	0.02	mg/kg-dry
A31 @ 15	4/7/2011	E909.0	Lead 210	0.6	-1000	pCi/g-dry
A31 @ 15	4/7/2011	E908.0	Thorium 230	1.2	-1000	pCi/g-dry
A31 @ 15	4/7/2011	SW6020	Uranium	1.69	0.02	mg/kg-dry
A45 @ 5	4/7/2011	E909.0	Lead 210	0.7	-1000	pCi/g-dry
A45 @ 5	4/7/2011	E908.0	Thorium 230	0.6	-1000	pCi/g-dry
A45 @ 5	4/7/2011	SW6020	Uranium	1.52	0.02	mg/kg-dry
A47 @ 15	4/7/2011	E909.0	Lead 210	1.6	-1000	pCi/g-dry
A47 @ 15	4/7/2011	E908.0	Thorium 230	3.3	-1000	pCi/g-dry
A47 @ 15	4/7/2011	SW6020	Uranium	4.08	0.02	mg/kg-dry
A51 @ 5	4/7/2011	E909.0	Lead 210	1	-1000	pCi/g-dry
A51 @ 5	4/7/2011	E908.0	Thorium 230	1.5	-1000	pCi/g-dry
A51 @ 5	4/7/2011	SW6020	Uranium	1.95	0.02	mg/kg-dry
A51 @ 15	4/7/2011	E909.0	Lead 210	0.8	-1000	pCi/g-dry
A51 @ 15	4/7/2011	E908.0	Thorium 230	1.6	-1000	pCi/g-dry
A51 @ 15	4/7/2011	SW6020	Uranium	1.86	0.02	mg/kg-dry
A53 @ 5	4/7/2011	E909.0	Lead 210	0.8	-1000	pCi/g-dry
A53 @ 5	4/7/2011	E908.0	Thorium 230	1.1	-1000	pCi/g-dry
A53 @ 5	4/7/2011	SW6020	Uranium	2.11	0.02	mg/kg-dry
A53 @ 15	4/7/2011	E909.0	Lead 210	0.5	-1000	pCi/g-dry
A53 @ 15	4/7/2011	E908.0	Thorium 230	0.8	-1000	pCi/g-dry
A53 @ 15	4/7/2011	SW6020	Uranium	1.71	0.02	mg/kg-dry

**Table 4: Study Area B Direct Gamma Radiation Readings**

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
B1	440850	4767359	18		4/4/2011
B2	440850	4767209	16		4/4/2011
B3	441000	4767209	14		4/4/2011
B4	441000	4767359	14		4/4/2011
B5	441000	4767509	20		4/4/2011
B6	441150	4767659	16		4/4/2011
B7	441150	4767509	14		4/4/2011
B8	441150	4767359	14		4/4/2011
B9	441150	4767209	16		4/4/2011
B10	441150	4767059	16		4/4/2011
B11	441150	4766909	16		4/4/2011
B12	441300	4766609	18		4/4/2011
B13	441300	4766759	20		4/4/2011
B14	441300	4766909	16		4/4/2011
B15	441300	4767059	14		4/4/2011
B16	441300	4767209	16		4/4/2011
B17	441300	4767359	14		4/4/2011
B18	441300	4767509	16		4/4/2011
B19	441300	4767659	16		4/4/2011
B20	441300	4767809	16		4/4/2011
B21	441450	4767959	16		4/4/2011
B22	441450	4767809	16		4/4/2011
B23	441450	4767659	16		4/4/2011
B24	441450	4767509	14		4/4/2011
B25	441450	4767359	14		4/4/2011
B26	441450	4767209	14		4/4/2011
B27	441450	4767059	16		4/4/2011
B28	441450	4766909	16		4/4/2011
B29	441450	4766759	18		4/4/2011
B30	441450	4766609	16		4/4/2011
B31	441450	4766459	20		4/4/2011
B32	441600	4766309	20	Low spot	4/5/2011
B33	441600	4766459	18		4/5/2011
B34	441600	4766609	18		4/5/2011
B35	441600	4766759	18		4/5/2011
B36	441600	4766909	16		4/5/2011
B37	441600	4767059	18		4/5/2011
B38	441600	4767209	18		4/5/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
B39	441600	4767359	16		4/5/2011
B40	441600	4767509	14		4/5/2011
B41	441600	4767659	14		4/5/2011
B42	441600	4767809	14		4/5/2011
B43	441600	4767959	18		4/5/2011
B44	441600	4768109	18		4/5/2011
B45	441750	4768259	16		4/6/2011
B46	441750	4768109	16		4/6/2011
B47	441750	4767959	15		4/6/2011
B48	441750	4767809	14		4/6/2011
B49	441750	4767659	15		4/5/2011
B50	441750	4767509	15		4/5/2011
B51	441750	4767359	20		4/5/2011
B52	441750	4767209	16		4/5/2011
B53	441750	4767059	16		4/5/2011
B54	441750	4766909	20		4/5/2011
B55	441750	4766759	18		4/5/2011
B56	441750	4766609	20		4/5/2011
B57	441750	4766459	20		4/5/2011
B58	441750	4766309	18		4/5/2011
B59	441900	4766159	18		4/5/2011
B60	441900	4766309	18		4/5/2011
B61	441900	4766459	20		4/5/2011
B62	441900	4766609	18		4/5/2011
B63	441900	4766759	18		4/5/2011
B64	441900	4766909	18		4/5/2011
B65	441900	4767059	16		4/5/2011
B66	441900	4767209	16		4/5/2011
B67	441900	4767359	18		4/6/2011
B68	441900	4767509	17		4/5/2011
B69	441900	4767659	19		4/5/2011
B70	441900	4767809	14		4/6/2011
B71	441900	4767959	16		4/6/2011
B72	441900	4768109	17		4/6/2011
B73	441900	4768259	12		4/6/2011
B74	442050	4768259	16		4/6/2011
B75	442050	4768109	17		4/6/2011
B76	442050	4767959	16		4/6/2011
B77	442050	4767809	14		4/6/2011
B78	442050	4767659	17		4/5/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
B79	442050	4767509	16		4/5/2011
B80	442050	4767359	17		4/5/2011
B81	442050	4767209	22		4/5/2011
B82	442050	4767059	16		4/5/2011
B83	442050	4766909	16		4/5/2011
B84	442050	4766759	20		4/5/2011
B85	442050	4766609	20		4/5/2011
B86	442050	4766459	16		4/5/2011
B87	442050	4766309	18		4/5/2011
B88	442050	4766159	16		4/5/2011
B89	442050	4766009	16		4/5/2011
B90	442200	4766009	16	Soil disturbed	4/5/2011
B91	442200	4766159	16		4/5/2011
B92	442200	4766309	14		4/5/2011
B93	442200	4766459	16		4/5/2011
B94	442200	4766609	18		4/5/2011
B95	442200	4766759	18		4/5/2011
B96	442200	4766909	17		4/5/2011
B97	442200	4767059	19		4/5/2011
B98	442200	4767209	18		4/5/2011
B99	442200	4767359	19		4/5/2011
B100	442200	4767509	15		4/5/2011
B101	442200	4767659	16		4/5/2011
B102	442200	4767809	14		4/6/2011
B103	442200	4767959	14		4/6/2011
B104	442200	4768109	15		4/6/2011
B105	442350	4767959	18		4/6/2011
B106	442350	4767809	18		4/6/2011
B107	442350	4767659	18		4/5/2011
B108	442350	4767509	17		4/5/2011
B109	442350	4767359	16		4/5/2011
B110	442350	4767059	17		4/5/2011
B111	442350	4766909	16		4/5/2011
B112	442350	4766759	13		4/5/2011
B113	442350	4766609	16		4/5/2011
B114	442350	4766459	18		4/5/2011
B115	442350	4766309	18		4/5/2011
B116	442350	4766159	16		4/5/2011
B117	442350	4766009	18		4/5/2011
B118	442500	4766009	18		4/5/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
B119	442500	4766159	18		4/5/2011
B120	442500	4766309	18		4/5/2011
B121	442500	4766459	17		4/5/2011
B122	442500	4766609	17		4/5/2011
B123	442500	4766759	17		4/5/2011
B124	442500	4766909	19		4/5/2011
B125	442500	4767059	17		4/5/2011
B126	442500	4767509	18		4/5/2011
B127	442500	4767659	18		4/5/2011
B128	442500	4767809	18		4/6/2011
B129	442650	4767059	16		4/5/2011
B130	442650	4766909	18		4/5/2011
B131	442650	4766759	20		4/5/2011
B132	442650	4766609	16		4/5/2011
B133	442650	4766459	18		4/5/2011
B134	442650	4766309	18		4/5/2011
B135	442650	4766159	18	Beside Highway	4/5/2011
B136	442650	4766009	16		4/5/2011
B137	442800	4766009	18	In man-made ditch, collected from top	4/5/2011
B138	442800	4766159	18		4/5/2011
B139	442800	4766309	20		4/5/2011
B140	442800	4766459	16		4/5/2011
B141	442800	4766609	16		4/5/2011
B142	442800	4766759	18		4/5/2011
B143	442800	4766909	17		4/5/2011
B144	442800	4767059	18		4/4/2011
B145	442950	4766909	19		4/4/2011
B146	442950	4766759	24		4/4/2011
B147	442950	4766609	17		4/4/2011
B148	442950	4766459	17		4/4/2011
B149	442950	4766309	20		4/4/2011
B150	442950	4766159	18		4/4/2011
B151	442950	4766009	17		4/4/2011
B152	443100	4766009	17		4/4/2011
B153	443100	4766159	18		4/4/2011
B154	443100	4766309	18		4/4/2011
B155	443100	4766459	22		4/4/2011
B156	443100	4766609	16		4/4/2011
B157	443100	4766759	18		4/4/2011
B158	443100	4766909	17		4/4/2011

Point	POINT_X	POINT_Y	Gamma Reading	Notes	Date
B159	443250	4766759	18		4/4/2011
B160	443250	4766609	36		4/4/2011
B161	443250	4766459	18		4/4/2011
B162	443250	4766309	20		4/4/2011
B163	443250	4766159	18		4/4/2011
B164	443250	4766009	22		4/4/2011
B165	443400	4766159	19		4/4/2011
B166	443400	4766309	19		4/4/2011
B167	443400	4766459	19		4/4/2011
B168	443400	4766609	24		4/4/2011
B169	443550	4766459	19		4/4/2011
B170	443550	4766309	19		4/4/2011

**Table 5: Study Area B Soil Sample Radium 226 Results**

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B1 @ 5	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B1 @ 15	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B3 @ 5	4/4/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B3 @ 15	4/4/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B5 @ 5	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B5 @ 15	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B6 @ 5	4/4/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B6 @ 15	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B8 @ 5	4/4/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B8 @ 15	4/4/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B10 @ 5	4/4/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B10 @ 15	4/4/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B12 @ 5	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B12 @ 15	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B14 @ 5	4/4/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B14 @ 15	4/4/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B16 @ 5	4/4/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B16 @ 15	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B18 @ 5	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B18 @ 15	4/4/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B20 @ 5	4/4/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B20 @ 15	4/4/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B21 @ 5	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B21 @ 15	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B23 @ 5	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B23 @ 15	4/4/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B25 @ 5	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B25 @ 15	4/4/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B27 @ 5	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B27 @ 15	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B29 @ 5	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B29 @ 15	4/4/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B31 @ 5	4/4/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B31 @ 15	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B32 @ 5	4/5/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B32 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B34 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B34 @ 15	4/5/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B36 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B36 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B38 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B38 @ 15	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B40 @ 5	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B40 @ 15	4/5/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B42 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B42 @ 15	4/5/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B44 @ 5	4/5/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B44 @ 15	4/5/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B45 @ 5	4/6/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
B45 @ 15	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B47 @ 5	4/6/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B47 @ 15	4/6/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B49 @ 5	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B49 @ 15	4/5/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B51 @ 5	4/5/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B51 @ 15	4/5/2011	E901.1	Radium 226	0.4	0.3	pCi/g-dry
B53 @ 5	4/5/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B53 @ 15	4/5/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B55 @ 5	4/5/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B55 @ 15	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B57 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B57 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B60 @ 5	4/5/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
B60 @ 15	4/5/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B62 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B62 @ 15	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B64 @ 5	4/5/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B64 @ 15	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B66 @ 5	4/5/2011	E901.1	Radium 226	0.3	0.3	pCi/g-dry
B66 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B68 @ 5	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B68 @ 15	4/5/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B70 @ 5	4/6/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B70 @ 15	4/6/2011	E901.1	Radium 226	1	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B72 @ 5	4/6/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B72 @ 15	4/6/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B74 @ 5	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B74 @ 15	4/6/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B76 @ 5	4/6/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B76 @ 15	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B78 @ 5	4/5/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B78 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B80 @ 5	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B80 @ 15	4/5/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B82 @ 5	4/5/2011	E901.1	Radium 226	0.2	0.3	pCi/g-dry
B82 @ 15	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B84 @ 5	4/5/2011	E901.1	Radium 226	2	0.3	pCi/g-dry
B84 @ 15	4/5/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B86 @ 5	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B86 @ 15	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B88 @ 5	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B88 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B90 @ 5	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B90 @ 15	4/5/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B92 @ 5	4/5/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B92 @ 15	4/5/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B94 @ 5	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B94 @ 15	4/5/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
B96 @ 5	4/5/2011	E901.1	Radium 226	0.3	0.3	pCi/g-dry
B96 @ 15	4/5/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B98 @ 5	4/5/2011	E901.1	Radium 226	0.1	0.3	pCi/g-dry
B98 @ 15	4/5/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B100 @ 5	4/5/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B100 @ 15	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B102 @ 5	4/6/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B102 @ 15	4/6/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B104 @ 5	4/6/2011	E901.1	Radium 226	0.3	0.3	pCi/g-dry
B104 @ 15	4/6/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B105 @ 5	4/6/2011	E901.1	Radium 226	2.5	0.3	pCi/g-dry
B105 @ 15	4/6/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B107 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B107 @ 15	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B109 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B109 @ 15	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B110 @ 5	4/5/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B110 @ 15	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B112 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B112 @ 15	4/5/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B114 @ 5	4/5/2011	E901.1	Radium 226	2.5	0.3	pCi/g-dry
B114 @ 15	4/5/2011	E901.1	Radium 226	3.8	0.3	pCi/g-dry
B116 @ 5	4/5/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B116 @ 15	4/5/2011	E901.1	Radium 226	2	0.3	pCi/g-dry
B118 @ 5	4/5/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
B118 @ 15	4/5/2011	E901.1	Radium 226	2.7	0.3	pCi/g-dry
B120 @ 5	4/5/2011	E901.1	Radium 226	0.5	0.3	pCi/g-dry
B120 @ 15	4/5/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
B122 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B122 @ 15	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B124 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B124 @ 15	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B126 @ 5	4/5/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B126 @ 15	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B128 @ 5	4/6/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B128 @ 15	4/6/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B129 @ 5	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B129 @ 15	4/5/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
B131 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B131 @ 15	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B133 @ 5	4/5/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B133 @ 15	4/5/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B135 @ 5	4/5/2011	E901.1	Radium 226	2	0.3	pCi/g-dry
B135 @ 15	4/5/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B137 @ 5	4/5/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B137 @ 15	4/5/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
B139 @ 5	4/5/2011	E901.1	Radium 226	2.8	0.3	pCi/g-dry
B139 @ 15	4/5/2011	E901.1	Radium 226	5.2	0.3	pCi/g-dry
B141 @ 5	4/5/2011	E901.1	Radium 226	0.8	0.3	pCi/g-dry
B141 @ 15	4/5/2011	E901.1	Radium 226	0.7	0.3	pCi/g-dry
B143 @ 5	4/5/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B143 @ 15	4/5/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B146 @ 5	4/4/2011	E901.1	Radium 226	1.8	0.3	pCi/g-dry
B146 @ 15	4/4/2011	E901.1	Radium 226	2	0.3	pCi/g-dry
B148 @ 5	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B148 @ 15	4/4/2011	E901.1	Radium 226	1	0.3	pCi/g-dry
B150 @ 5	4/4/2011	E901.1	Radium 226	1.6	0.3	pCi/g-dry
B150 @ 15	4/4/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B152 @ 5	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B152 @ 15	4/4/2011	E901.1	Radium 226	1.9	0.3	pCi/g-dry
B154 @ 5	4/4/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B154 @ 15	4/4/2011	E901.1	Radium 226	0.6	0.3	pCi/g-dry
B156 @ 5	4/4/2011	E901.1	Radium 226	2.3	0.3	pCi/g-dry
B156 @ 15	4/4/2011	E901.1	Radium 226	1.7	0.3	pCi/g-dry
B158 @ 5	4/4/2011	E901.1	Radium 226	0.9	0.3	pCi/g-dry
B158 @ 15	4/4/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B159 @ 5	4/4/2011	E901.1	Radium 226	1.2	0.3	pCi/g-dry
B159 @ 15	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B161 @ 5	4/4/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
B161 @ 15	4/4/2011	E901.1	Radium 226	2.1	0.3	pCi/g-dry
B163 @ 5	4/4/2011	E901.1	Radium 226	1.4	0.3	pCi/g-dry
B163 @ 15	4/4/2011	E901.1	Radium 226	1.5	0.3	pCi/g-dry
B166 @ 5	4/4/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B166 @ 15	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry
B168 @ 5	4/4/2011	E901.1	Radium 226	11.7	0.3	pCi/g-dry
B168 @ 15	4/4/2011	E901.1	Radium 226	6.9	0.3	pCi/g-dry
B169 @ 5	4/4/2011	E901.1	Radium 226	1.3	0.3	pCi/g-dry
B169 @ 15	4/4/2011	E901.1	Radium 226	1.1	0.3	pCi/g-dry

**Table 6: Study Area B Soil Samples Tested for Total Uranium, Thorium 230 and Lead 210**

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B8 @ 5	4/4/2011	E909.0	Lead 210	0.2	-1000	pCi/g-dry
B8 @ 5	4/4/2011	E908.0	Thorium 230	0.3	-1000	pCi/g-dry
B8 @ 5	4/4/2011	SW6020	Uranium	0.91	0.02	mg/kg-dry
B8 @ 15	4/4/2011	E909.0	Lead 210	0.07	-1000	pCi/g-dry
B8 @ 15	4/4/2011	E908.0	Thorium 230	0.3	-1000	pCi/g-dry
B8 @ 15	4/4/2011	SW6020	Uranium	0.87	0.015	mg/kg-dry
B21 @ 5	4/4/2011	E909.0	Lead 210	0.7	-1000	pCi/g-dry
B21 @ 5	4/4/2011	E908.0	Thorium 230	0.6	-1000	pCi/g-dry
B21 @ 5	4/4/2011	SW6020	Uranium	1.28	0.02	mg/kg-dry
B21 @ 15	4/4/2011	E909.0	Lead 210	0.5	-1000	pCi/g-dry
B21 @ 15	4/4/2011	E908.0	Thorium 230	0.4	-1000	pCi/g-dry
B21 @ 15	4/4/2011	SW6020	Uranium	1.35	0.015	mg/kg-dry
B44 @ 5	4/5/2011	E909.0	Lead 210	0.6	-1000	pCi/g-dry
B44 @ 5	4/5/2011	E908.0	Thorium 230	0.7	-1000	pCi/g-dry
B44 @ 5	4/5/2011	SW6020	Uranium	1.52	0.02	mg/kg-dry
B44 @ 15	4/5/2011	E909.0	Lead 210	0.3	-1000	pCi/g-dry
B44 @ 15	4/5/2011	E908.0	Thorium 230	0.3	-1000	pCi/g-dry
B44 @ 15	4/5/2011	SW6020	Uranium	1.14	0.015	mg/kg-dry
B68 @ 5	4/5/2011	E909.0	Lead 210	0.4	-1000	pCi/g-dry
B68 @ 5	4/5/2011	E908.0	Thorium 230	0.2	-1000	pCi/g-dry
B68 @ 5	4/5/2011	SW6020	Uranium	1.04	0.02	mg/kg-dry
B68 @ 15	4/5/2011	E909.0	Lead 210	0.3	-1000	pCi/g-dry
B68 @ 15	4/5/2011	E908.0	Thorium 230	0.6	-1000	pCi/g-dry
B68 @ 15	4/5/2011	SW6020	Uranium	1.12	0.015	mg/kg-dry
B102 @ 5	4/6/2011	E909.0	Lead 210	0.8	-1000	pCi/g-dry
B102 @ 5	4/6/2011	E908.0	Thorium 230	0.7	-1000	pCi/g-dry
B102 @ 5	4/6/2011	SW6020	Uranium	1.39	0.02	mg/kg-dry
B102 @ 15	4/6/2011	E909.0	Lead 210	0.4	-1000	pCi/g-dry
B102 @ 15	4/6/2011	E908.0	Thorium 230	1	-1000	pCi/g-dry
B102 @ 15	4/6/2011	SW6020	Uranium	1.2	0.015	mg/kg-dry
B105 @ 5	4/6/2011	E909.0	Lead 210	1.6	-1000	pCi/g-dry
B105 @ 5	4/6/2011	E908.0	Thorium 230	1.8	-1000	pCi/g-dry
B105 @ 5	4/6/2011	SW6020	Uranium	2.45	0.02	mg/kg-dry
B105 @ 15	4/6/2011	E909.0	Lead 210	2.4	-1000	pCi/g-dry
B105 @ 15	4/6/2011	E908.0	Thorium 230	3	-1000	pCi/g-dry
B105 @ 15	4/6/2011	SW6020	Uranium	3.3	0.015	mg/kg-dry
B112 @ 5	4/5/2011	E909.0	Lead 210	1	-1000	pCi/g-dry

Sample ID @ Depth	Collection Date	Test No.	Analyte	Final Value	PQL	Units
B112 @ 5	4/5/2011	E908.0	Thorium 230	0.4	-1000	pCi/g-dry
B112 @ 5	4/5/2011	SW6020	Uranium	0.96	0.02	mg/kg-dry
B112 @ 15	4/5/2011	E909.0	Lead 210	0.2	-1000	pCi/g-dry
B112 @ 15	4/5/2011	E908.0	Thorium 230	0.3	-1000	pCi/g-dry
B112 @ 15	4/5/2011	SW6020	Uranium	0.72	0.015	mg/kg-dry
B126 @ 5	4/5/2011	E909.0	Lead 210	0.2	-1000	pCi/g-dry
B126 @ 5	4/5/2011	E908.0	Thorium 230	0.3	-1000	pCi/g-dry
B126 @ 5	4/5/2011	SW6020	Uranium	1.19	0.02	mg/kg-dry
B126 @ 15	4/5/2011	E909.0	Lead 210	0.2	-1000	pCi/g-dry
B126 @ 15	4/5/2011	E908.0	Thorium 230	0.5	-1000	pCi/g-dry
B126 @ 15	4/5/2011	SW6020	Uranium	1.09	0.015	mg/kg-dry
B131 @ 5	4/5/2011	E909.0	Lead 210	0.5	-1000	pCi/g-dry
B131 @ 5	4/5/2011	E908.0	Thorium 230	0.9	-1000	pCi/g-dry
B131 @ 5	4/5/2011	SW6020	Uranium	1.63	0.02	mg/kg-dry
B131 @ 15	4/5/2011	E909.0	Lead 210	0.5	-1000	pCi/g-dry
B131 @ 15	4/5/2011	E908.0	Thorium 230	0.6	-1000	pCi/g-dry
B131 @ 15	4/5/2011	SW6020	Uranium	2.04	0.015	mg/kg-dry

**APPENDIX C**  
**Analytical Data**

# ANALYTICAL SUMMARY REPORT

May 31, 2011

Power Resources dba Cameco Resources  
 762 Ross Rd (Douglas, WY 82633)  
 Glenrock, WY 82637

Workorder No.: C11040278

Project Name: 11-4025 Mine Unit K North

Energy Laboratories, Inc. Casper WY received the following 45 samples for Power Resources dba Cameco Resources on 4/7/2011 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C11040278-001	A2 @ 5	04/07/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040278-002	A5 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-003	A7 @ 5	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040278-004	A8 @ 5	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040278-005	A10 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-006	A12 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-007	A14 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-008	A16 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-009	A18 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-010	A20 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-011	A22 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-012	A25 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-013	A27 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-014	A29 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-015	A31 @ 5	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040278-016	A33 @ 5	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040278-017	A35 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-018	A37 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-019	A39 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-020	A41 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-021	A43 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040278-022	A45 @ 5	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040278-023	A49 @ 5	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040278-024	A51 @ 5	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040278-025	A53 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-026	A55 @ 5	04/07/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040278-027	A57 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040278-028	A59 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-029	A61 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-030	A64 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-031	A66 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-032	A68 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-033	A70 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-034	A72 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-035	A74 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-036	A77 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-037	A79 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-038	A81 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-039	A83 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-040	A85 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-041	A87 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-042	A89 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-043	A91 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-044	A94 @ 5	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040278-045	A47 @ 5	04/07/11 0:00	04/07/11	Soil	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

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

Report Approved By:

*Stephanie D. Waldrop*  
 Reporting Supervisor

Digitally signed by  
 Stephanie Waldrop  
 Date: 2011.05.31 13:18:41 -06:00



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**CLIENT:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North  
**Sample Delivery Group:** C11040278

**Report Date:** 05/31/11

## **CASE NARRATIVE**

### **BRANCH LABORATORY SUBCONTRACT ANALYSIS**

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-001

**Collection Date:** 04/07/11

**Client Sample ID:** A2 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-002

**Collection Date:** 04/07/11

**Client Sample ID:** A5 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-003

**Collection Date:** 04/07/11

**Client Sample ID:** A7 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.13	mg/kg-dry		0.02		SW6020	04/19/11 17:49 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	1.2	pCi/g-dry				E909.0	05/20/11 09:55 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 09:55 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 09:55 / eli-cs
Thorium 230	0.8	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-004  
**Client Sample ID:** A8 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-005  
**Client Sample ID:** A10 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.2	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-006  
**Client Sample ID:** A12 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-007  
**Client Sample ID:** A14 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-008  
**Client Sample ID:** A16 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-009  
**Client Sample ID:** A18 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.8	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-010  
**Client Sample ID:** A20 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-011  
**Client Sample ID:** A22 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-012  
**Client Sample ID:** A25 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-013  
**Client Sample ID:** A27 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-014  
**Client Sample ID:** A29 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-015  
**Client Sample ID:** A31 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.54	mg/kg-dry		0.02		SW6020	04/19/11 17:59 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.9	pCi/g-dry				E909.0	05/20/11 12:07 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 12:07 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 12:07 / eli-cs
Thorium 230	0.9	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-016  
**Client Sample ID:** A33 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.8	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-017  
**Client Sample ID:** A35 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-018  
**Client Sample ID:** A37 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-019  
**Client Sample ID:** A39 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-020  
**Client Sample ID:** A41 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.0	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-021  
**Client Sample ID:** A43 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-022  
**Client Sample ID:** A45 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.52	mg/kg-dry		0.02		SW6020	04/19/11 18:26 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.7	pCi/g-dry				E909.0	05/20/11 14:18 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 14:18 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 14:18 / eli-cs
Thorium 230	0.6	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-023  
**Client Sample ID:** A49 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.2	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-024  
**Client Sample ID:** A51 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.95	mg/kg-dry		0.02		SW6020	04/19/11 18:31 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	1	pCi/g-dry				E909.0	05/20/11 16:29 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 16:29 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 16:29 / eli-cs
Thorium 230	1.5	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.5	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-025  
**Client Sample ID:** A53 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	2.11	mg/kg-dry		0.02		SW6020	04/19/11 18:36 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.8	pCi/g-dry				E909.0	05/20/11 18:41 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 18:41 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 18:41 / eli-cs
Thorium 230	1.1	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.2	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-026

**Collection Date:** 04/07/11

**Client Sample ID:** A55 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-027

**Collection Date:** 04/07/11

**Client Sample ID:** A57 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-028

**Collection Date:** 04/06/11

**Client Sample ID:** A59 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-029

**Collection Date:** 04/06/11

**Client Sample ID:** A61 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-030  
**Client Sample ID:** A64 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-031  
**Client Sample ID:** A66 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-032  
**Client Sample ID:** A68 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-033  
**Client Sample ID:** A70 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-034

**Collection Date:** 04/06/11

**Client Sample ID:** A72 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-035

**Collection Date:** 04/06/11

**Client Sample ID:** A74 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	1.0	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-036

**Collection Date:** 04/06/11

**Client Sample ID:** A77 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.3	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-037

**Collection Date:** 04/06/11

**Client Sample ID:** A79 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	5.0	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.8	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-038  
**Client Sample ID:** A81 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-039  
**Client Sample ID:** A83 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.8	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-040  
**Client Sample ID:** A85 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-041  
**Client Sample ID:** A87 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040278-042  
**Client Sample ID:** A89 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.4	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-043  
**Client Sample ID:** A91 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.9	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.9	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-044  
**Client Sample ID:** A94 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.6	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Lab ID:** C11040278-045  
**Client Sample ID:** A47 @ 5

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.5	pCi/g-dry		0.3		E901.1	05/02/11 06:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/02/11 06:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040278

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: R145567
<b>Sample ID: LCS-R145567</b>										
		Laboratory Control Sample				Run: GAM-HPGE_110502A				
Bismuth 214		2.80	pCi/g-dry	0.30	108	70	130			05/02/11 06:30
<b>Sample ID: MB-R145567</b>										
		2 Method Blank				Run: GAM-HPGE_110502A				
Radium 226		ND	pCi/g-dry							05/02/11 06:30
Radium 226 precision (±)		ND	pCi/g-dry							U
<b>Sample ID: C11040278-010ADUP</b>										
		2 Sample Duplicate				Run: GAM-HPGE_110502A				
Radium 226		1.20	pCi/g-dry	0.30				8.0		05/02/11 06:30
Radium 226 precision (±)		0.400	pCi/g-dry							20
<b>Sample ID: C11040278-020ADUP</b>										
		2 Sample Duplicate				Run: GAM-HPGE_110502A				
Radium 226		3.50	pCi/g-dry	0.30				15		05/02/11 06:30
Radium 226 precision (±)		0.700	pCi/g-dry							20
<b>Sample ID: C11040278-030ADUP</b>										
		2 Sample Duplicate				Run: GAM-HPGE_110502A				
Radium 226		1.40	pCi/g-dry	0.30				19		05/02/11 06:30
Radium 226 precision (±)		0.400	pCi/g-dry							20
<b>Sample ID: C11040278-040ADUP</b>										
		2 Sample Duplicate				Run: GAM-HPGE_110502A				
Radium 226		1.70	pCi/g-dry	0.30				38		05/02/11 06:30
Radium 226 precision (±)		0.600	pCi/g-dry							20 R

- Duplicate RPD is high but the activities of original sample and duplicate are within the limits of precision.

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040278

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>										Batch: 29594
<b>Sample ID: C11040291-069AMS</b>										
Sample Matrix Spike		Run: EGG-ORTEC_110510B								
Thorium 230	27.3	pCi/g-dry		111		70	130			05/12/11 12:55
<b>Sample ID: C11040291-069AMSD</b>										
Sample Matrix Spike Duplicate		Run: EGG-ORTEC_110510B								
Thorium 230	25.8	pCi/g-dry		110		70	130	5.7		05/12/11 12:55
<b>Sample ID: LCS-29594</b>										
Laboratory Control Sample		Run: EGG-ORTEC_110510B								
Thorium 230	1.05	pCi/g-dry		105		70	130			05/12/11 12:55
<b>Sample ID: MB-29594</b>										
3 Method Blank		Run: EGG-ORTEC_110510B								
Thorium 230	0.02	pCi/g-dry								05/12/11 12:55
Thorium 230 precision ( $\pm$ )	0.02	pCi/g-dry								U
Thorium 230 MDC	0.03	pCi/g-dry								

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040278

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>										Batch: T_13935
<b>Sample ID: C11040291-069AMSD</b>										
		Sample Matrix Spike Duplicate			Run: SUB-T40471			05/22/11 05:45		
Lead 210		13.6	pCi/g-dry	84		70	130	7.8		17.3
<b>Sample ID: C11040291-069AMS</b>										
		Sample Matrix Spike			Run: SUB-T40471			05/22/11 03:33		
Lead 210		12.5	pCi/g-dry	73		70	130			
<b>Sample ID: LCS-13935</b>										
		Laboratory Control Sample			Run: SUB-T40471			05/20/11 07:44		
Lead 210		30.7	pCi/g-dry	89		70	130			
<b>Sample ID: MB-13935</b>										
		3 Method Blank			Run: SUB-T40471			05/20/11 05:32		
Lead 210		0.5	pCi/g-dry							U
Lead 210 precision ( $\pm$ )		0.6	pCi/g-dry							
Lead 210 MDC		1	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040278

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> SW6020										Batch: 29594
<b>Sample ID:</b> MB-29594	Method Blank									
Uranium		0.0005	mg/kg-dry	3E-05						Run: ICPMS2-C_110419A 04/19/11 17:33
<b>Sample ID:</b> LCS2-29594	Laboratory Control Sample									
Uranium		4.97	mg/kg-dry	0.015	99	75	125			Run: ICPMS2-C_110419A 04/19/11 17:39
<b>Sample ID:</b> C11040291-069AMS	Sample Matrix Spike									
Uranium		2.78	mg/kg-dry	0.015	94	75	125			Run: ICPMS2-C_110419A 04/19/11 20:15
<b>Sample ID:</b> C11040291-069AMSD	Sample Matrix Spike Duplicate									
Uranium		2.67	mg/kg-dry	0.015	89	75	125	4.3	20	Run: ICPMS2-C_110419A 04/19/11 20:41

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

# Workorder Receipt Checklist



Power Resources dba Cameco Resources

C11040278

Login completed by: Corinne Wagner

Date Received: 4/7/2011

Reviewed by: BL2000\hackerman

Received by: em

Reviewed Date: 4/11/2011

Carrier Hand Del  
name:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on 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?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	N/A °C		
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"/>

Contact and Corrective Action Comments:

None



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>			Project Name, PWS, Permit, Etc. <u>11-4025 (Mine Unit K North)</u>			Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>					
Report Mail Address: <u>913 Foster Rd., Casper, WY</u>			Contact Name: <u>Dane Ode</u>		Phone/Fax: <u>234-5511</u>		Email: <u>dodde@testair.com</u>		Sampler: (Please Print) <u>P. Ode</u>				
Invoice Address: <u>Cameco Resources</u>			Invoice Contact & Phone: <u>John McCarthy</u>				Purchase Order:		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 <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC			ANALYSIS REQUESTED						Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page		Shipped by: <u>1-4025</u>		
			SEE ATTACHED						RUSH		Cooler ID(s): <u>11-4025</u>		
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date	Collection Time	MATRIX	Normal Turnaround (TAT)						Receipt Temp <u>14/12</u> °C	
1 See attached spreadsheet					S	X						On Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Custody Seal Y <input checked="" type="checkbox"/> W
2													Bottles/Coolers B C
3 A7@5						X	X	X	X				Intact Y N
4 A7@15						X	X	X	X				Signature Match Y N
5 A31@5						X	X	X	X				
6 A31@15						X	X	X	X				
7 A47@5						X	X	X	X				
8 A47@15						X	X	X	X				
9 A51@5						X	X	X	X				
10 A51@15						X	X	X	X				
Custody Record MUST be Signed			Relinquished by (print): <u>Dane Ode</u>		Date/Time: <u>4/7/11 1306</u>	Signature: <u>[Signature]</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1305</u>	Signature: <u>[Signature]</u>		
			Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1640</u>	Signature: <u>[Signature]</u>		Received by (print): <u>[Signature]</u>		Date/Time: <u>4/7/11 1640</u>	Signature: <u>[Signature]</u>		
			Sample Disposal: Return to Client:		Lab Disposal:								

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. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

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C00022



Sample ID  
↓ \* ↓

Study Area	Point ID	X	Y	Depth	Date Collected
A	2	-105.6799282	43.07947808	5	4/7/11
A	5	-105.6781006	43.08083968	5	↓
A	7	-105.6780709	43.07813835	5	↓
A	8	-105.6780113	43.07273568	5	4/6/11
A	10	-105.6779815	43.07003435	5	↓
A	12	-105.6761245	43.06869458	5	↓
A	14	-105.6761541	43.07139591	5	↓
A	16	-105.6761838	43.07409725	5	↓
A	18	-105.6762135	43.07679859	5	4/7/11
A	20	-105.6762432	43.07949992	5	↓
A	22	-105.676273	43.08220125	5	↓
A	25	-105.6744452	43.08356279	5	↓
A	27	-105.6744156	43.08086146	5	↓
A	29	-105.6743859	43.07816013	5	↓
A	31	-105.6743563	43.07545879	5	↓
A	33	-105.6743267	43.07275745	5	4/6/11
A	35	-105.6742971	43.07005612	5	↓
A	37	-105.6724401	43.06871629	5	↓
A	39	-105.6724696	43.07141763	5	↓
A	41	-105.6724992	43.07411896	5	↓
A	43	-105.6725287	43.0768203	5	4/7/11
A	45	-105.6725582	43.07952164	5	↓
A	47	-105.6725878	43.08222297	5	↓
A	49	-105.6726173	43.0849243	5	4/6/11
A	51	-105.6707599	43.08358445	5	4/7/11
A	53	-105.6707305	43.08088312	5	↓
A	55	-105.670701	43.07818178	5	↓
A	57	-105.6706716	43.07548045	5	↓
A	59	-105.6706421	43.07277911	5	4/6/11
A	61	-105.6706126	43.07007777	5	↓
A	64	-105.6687851	43.07143922	5	↓
A	66	-105.6688145	43.07414056	5	↓
A	68	-105.6688439	43.0768419	5	↓
A	70	-105.6688732	43.07954324	5	↓
A	72	-105.6689026	43.08224457	5	↓
A	74	-105.668932	43.08494591	5	↓
A	77	-105.6670747	43.083606	5	↓
A	79	-105.6670454	43.08090466	5	↓
A	81	-105.6670161	43.07820332	5	↓
A	83	-105.6669868	43.07550198	5	↓
A	85	-105.6669575	43.07280064	5	↓
A	87	-105.665159	43.07686338	5	↓
A	89	-105.6651882	43.07956472	5	↓
A	91	-105.6652175	43.08226606	5	↓
A	94	-105.6633603	43.08092608	5	↓



## ANALYTICAL SUMMARY REPORT

May 31, 2011

Power Resources dba Cameco Resources  
762 Ross Rd (Douglas, WY 82633)  
Glenrock, WY 82637

Workorder No.: C11040288

Project Name: 11-4025 Mine Unit K North

Energy Laboratories, Inc. Casper WY received the following 45 samples for Power Resources dba Cameco Resources on 4/7/2011 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C11040288-001	A2 @ 15	04/07/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040288-002	A5 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-003	A7 @ 15	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040288-004	A8 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040288-005	A10 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-006	A12 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-007	A14 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-008	A16 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-009	A18 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-010	A20 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-011	A22 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-012	A25 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-013	A27 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-014	A29 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-015	A31 @ 15	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040288-016	A33 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040288-017	A35 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-018	A37 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-019	A39 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-020	A41 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-021	A43 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040288-022	A45 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-023	A47 @ 15	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040288-024	A49 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040288-025	A51 @ 15	04/07/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040288-026	A53 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-027	A55 @ 15	04/07/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040288-028	A57 @ 15	04/07/11 0:00	04/07/11	Soil	Same As Above
C11040288-029	A59 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-030	A61 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-031	A64 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-032	A66 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-033	A68 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-034	A70 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-035	A72 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-036	A74 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-037	A77 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-038	A79 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-039	A81 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-040	A83 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-041	A85 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-042	A87 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-043	A89 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-044	A91 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040288-045	A94 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

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

Report Approved By:

*Stephanie D Waldrop*  
 Reporting Supervisor

Digitally signed by  
 Stephanie Waldrop  
 Date: 2011.05.31 13:21:23 -06:00



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**CLIENT:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Sample Delivery Group:** C11040288

## CASE NARRATIVE

### BRANCH LABORATORY SUBCONTRACT ANALYSIS

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-001

**Collection Date:** 04/07/11

**Client Sample ID:** A2 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.0	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-002

**Collection Date:** 04/07/11

**Client Sample ID:** A5 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-003

**Collection Date:** 04/07/11

**Client Sample ID:** A7 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.11	mg/kg-dry		0.02		SW6020	04/19/11 18:41 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.5	pCi/g-dry				E909.0	05/20/11 20:52 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 20:52 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 20:52 / eli-cs
Thorium 230	0.5	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-004  
**Client Sample ID:** A8 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-005  
**Client Sample ID:** A10 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-006  
**Client Sample ID:** A12 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-007  
**Client Sample ID:** A14 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-008  
**Client Sample ID:** A16 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-009  
**Client Sample ID:** A18 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-010  
**Client Sample ID:** A20 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-011  
**Client Sample ID:** A22 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-012  
**Client Sample ID:** A25 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-013  
**Client Sample ID:** A27 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-014  
**Client Sample ID:** A29 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-015  
**Client Sample ID:** A31 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.69	mg/kg-dry		0.02		SW6020	04/19/11 18:46 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.6	pCi/g-dry				E909.0	05/20/11 23:04 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/20/11 23:04 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/20/11 23:04 / eli-cs
Thorium 230	1.2	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.5	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-016  
**Client Sample ID:** A33 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.7	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-017  
**Client Sample ID:** A35 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-018  
**Client Sample ID:** A37 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-019  
**Client Sample ID:** A39 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-020  
**Client Sample ID:** A41 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.7	pCi/g-dry		0.3		E901.1	05/05/11 12:45 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/05/11 12:45 / plj

**Lab ID:** C11040288-021  
**Client Sample ID:** A43 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.8	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-022  
**Client Sample ID:** A45 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-023  
**Client Sample ID:** A47 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	4.08	mg/kg-dry		0.02		SW6020	04/19/11 18:51 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	1.6	pCi/g-dry				E909.0	05/21/11 01:15 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 01:15 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 01:15 / eli-cs
Thorium 230	3.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.8	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.2	pCi/g-dry				E908.0	05/12/11 08:44 / dmf

### RADIONUCLIDES - GAMMA

Radium 226	4.9	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-024  
**Client Sample ID:** A49 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.5	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-025

**Collection Date:** 04/07/11

**Client Sample ID:** A51 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.86	mg/kg-dry		0.02		SW6020	04/19/11 18:56 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.8	pCi/g-dry				E909.0	05/21/11 03:27 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 03:27 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 03:27 / eli-cs
Thorium 230	1.6	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.5	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-026  
**Client Sample ID:** A53 @ 15

**Collection Date:** 04/07/11

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.71	mg/kg-dry		0.02		SW6020	04/19/11 19:02 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.5	pCi/g-dry				E909.0	05/21/11 05:39 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 05:39 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 05:39 / eli-cs
Thorium 230	0.8	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 precision (±)	0.4	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 08:44 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-027  
**Client Sample ID:** A55 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-028  
**Client Sample ID:** A57 @ 15

**Collection Date:** 04/07/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-029  
**Client Sample ID:** A59 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-030  
**Client Sample ID:** A61 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-031  
**Client Sample ID:** A64 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-032  
**Client Sample ID:** A66 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.2	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-033  
**Client Sample ID:** A68 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-034  
**Client Sample ID:** A70 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-035

**Collection Date:** 04/06/11

**Client Sample ID:** A72 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-036

**Collection Date:** 04/06/11

**Client Sample ID:** A74 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-037

**Collection Date:** 04/06/11

**Client Sample ID:** A77 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.3	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-038

**Collection Date:** 04/06/11

**Client Sample ID:** A79 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.8	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-039  
**Client Sample ID:** A81 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-040  
**Client Sample ID:** A83 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-041  
**Client Sample ID:** A85 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-042  
**Client Sample ID:** A87 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit K North

**Report Date:** 05/31/11

**Lab ID:** C11040288-043

**Collection Date:** 04/06/11

**Client Sample ID:** A89 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-044

**Collection Date:** 04/06/11

**Client Sample ID:** A91 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.8	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Lab ID:** C11040288-045

**Collection Date:** 04/06/11

**Client Sample ID:** A94 @ 15

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/10/11 16:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/10/11 16:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: R145769
<b>Sample ID: LCS-R145769</b>	Laboratory Control Sample									Run: GAM-HPGE_110505A 05/05/11 12:45
Bismuth 214		7.70	pCi/g-dry	0.30	89	70	130			
<b>Sample ID: MB-R145769</b>	2	Method Blank								Run: GAM-HPGE_110505A 05/05/11 12:45
Radium 226		ND	pCi/g-dry							U
Radium 226 precision (±)		ND	pCi/g-dry							
<b>Sample ID: C11040288-010ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110505A 05/05/11 12:45
Radium 226		1.20	pCi/g-dry	0.30				40	20	R
Radium 226 precision (±)		0.500	pCi/g-dry							
- Duplicate RPD is high but the activity of the original sample and the Duplicate are within the limits of precision.										
<b>Sample ID: C11040288-020ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110505A 05/05/11 12:45
Radium 226		2.90	pCi/g-dry	0.30				7.1	20	
Radium 226 precision (±)		0.700	pCi/g-dry							
<b>Method: E901.1</b>										Batch: 29545
<b>Sample ID: LCS-R146048</b>	Laboratory Control Sample									Run: GAM-HPGE_110510A 05/10/11 16:30
Bismuth 214		7.80	pCi/g-dry	0.30	90	70	130			
<b>Sample ID: MB-R146048</b>	2	Method Blank								Run: GAM-HPGE_110510A 05/10/11 16:30
Radium 226		ND	pCi/g-dry							U
Radium 226 precision (±)		ND	pCi/g-dry							
<b>Sample ID: C11040288-030ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110510A 05/10/11 16:30
Radium 226		1.30	pCi/g-dry	0.30				14	20	
Radium 226 precision (±)		0.500	pCi/g-dry							
<b>Sample ID: C11040288-040ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110510A 05/10/11 16:30
Radium 226		2.10	pCi/g-dry	0.30				10	20	
Radium 226 precision (±)		0.500	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



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Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>										Batch: 29594
<b>Sample ID: C11040291-069AMS</b>										
Sample Matrix Spike		Run: EGG-ORTEC_110510B								
Thorium 230	27.3	pCi/g-dry		111		70	130			05/12/11 12:55
<b>Sample ID: C11040291-069AMSD</b>										
Sample Matrix Spike Duplicate		Run: EGG-ORTEC_110510B								
Thorium 230	25.8	pCi/g-dry		110		70	130	5.7		05/12/11 12:55
<b>Sample ID: LCS-29594</b>										
Laboratory Control Sample		Run: EGG-ORTEC_110510B								
Thorium 230	1.05	pCi/g-dry		105		70	130			05/12/11 12:55
<b>Sample ID: MB-29594</b>										
3 Method Blank		Run: EGG-ORTEC_110510B								
Thorium 230	0.02	pCi/g-dry								05/12/11 12:55
Thorium 230 precision ( $\pm$ )	0.02	pCi/g-dry								U
Thorium 230 MDC	0.03	pCi/g-dry								

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>										Batch: T_13935
<b>Sample ID: C11040291-069AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T40471				05/22/11 05:45
Lead 210		13.6	pCi/g-dry	84		70	130	7.8	17.3	
<b>Sample ID: C11040291-069AMS</b>		Sample Matrix Spike				Run: SUB-T40471				05/22/11 03:33
Lead 210		12.5	pCi/g-dry	73		70	130			
<b>Sample ID: LCS-13935</b>		Laboratory Control Sample				Run: SUB-T40471				05/20/11 07:44
Lead 210		30.7	pCi/g-dry	89		70	130			
<b>Sample ID: MB-13935</b>	3	Method Blank				Run: SUB-T40471				05/20/11 05:32
Lead 210		0.5	pCi/g-dry							U
Lead 210 precision ( $\pm$ )		0.6	pCi/g-dry							
Lead 210 MDC		1	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 05/31/11

**Project:** 11-4025 Mine Unit K North

**Work Order:** C11040288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> SW6020										Batch: 29594
<b>Sample ID:</b> MB-29594	Method Blank									
Uranium		0.0005	mg/kg-dry	3E-05						Run: ICPMS2-C_110419A 04/19/11 17:33
<b>Sample ID:</b> LCS2-29594	Laboratory Control Sample									
Uranium		4.97	mg/kg-dry	0.015	99	75	125			Run: ICPMS2-C_110419A 04/19/11 17:39
<b>Sample ID:</b> C11040291-069AMS	Sample Matrix Spike									
Uranium		2.78	mg/kg-dry	0.015	94	75	125			Run: ICPMS2-C_110419A 04/19/11 20:15
<b>Sample ID:</b> C11040291-069AMSD	Sample Matrix Spike Duplicate									
Uranium		2.67	mg/kg-dry	0.015	89	75	125	4.3	20	Run: ICPMS2-C_110419A 04/19/11 20:41

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

# Workorder Receipt Checklist



Power Resources dba Cameco Resources

C11040288

Login completed by: Corinne Wagner

Date Received: 4/7/2011

Reviewed by: BL2000\hackerman

Received by: em

Reviewed Date: 4/11/2011

Carrier Hand Del  
name:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on 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?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	N/A °C		
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"/>

Contact and Corrective Action Comments:

None



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT - Provide as much information as possible.

Company Name: <u>Western Environmental</u>		Project Name, PWS, Permit, Etc. <u>11-4025 (Mine Unit K North)</u>		Sample Origin State: <u>WV</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>913 Foster Rd., Capers, WV</u>		Contact Name: <u>Dane Ode</u>		Phone/Fax: <u>234-5511</u>		Email: <u>dode@testair.com</u>	
Invoice Address: <u>Comesa Resources</u>		Invoice Contact & Phone: <u>John McCarthy</u>		Purchase Order:		Quote/Bottle Order:	
Special Report/Formats - ELI must be notified prior to sample submittal for the following:  <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTWWWTP <input type="checkbox"/> State: <input type="checkbox"/> Other:		<input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT(Electronic Data) Format: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		ANALYSIS REQUESTED Number of Containers Sample Type: A W S V B O Air Water Solids/Solids Vegetation Bioassay Other <u>Radium-226</u> <u>Natural uranium</u> <u>Thorium-230</u> <u>Lead-210</u>		SEE ATTACHED Normal Turnaround (TAT)	
Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:		Shipped by: <u>11/4/11</u> Cooler ID(s): <u>11/4/11</u> Receipt Temp: <u>11/4/11</u> °C On Ice: Yes <input type="checkbox"/> No <input type="checkbox"/>		Custody Seal Y <input checked="" type="checkbox"/> N Bottles/Coolers B C Intact Y N Signature Match Y N		RUSH	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX		LABORATORY USE ONLY	
1 See attached spreadsheet				S			
2							
3 A7@5				X			
4 A7@15				X			
5 A31@5				X			
6 A31@15				X			
7 A49@5				X			
8 A47@15				X			
9 A51@5				X			
10 A51@15				X			
Custody Record MUST be Signed		Relinquished by (print): <u>Dane Ode</u>		Date/Time: <u>4/7/11 1306</u>		Received by (print): <u>John McCarthy</u>	
		Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1640</u>		Received by (print): <u>John McCarthy</u>	
		Sample Disposal: Return to Client:		Lab Disposal:		Received by (print): <u>John McCarthy</u>	
						Date/Time: <u>4/7/11 16:40</u>	

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. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

11-061



Study Area	Point ID	X	Y	Depth	Date Collected
A	2	-105.6799282	43.07947808	15	4/7/11
A	5	-105.6781006	43.08083968	15	
A	7	-105.6780709	43.07813835	15	↓
A	8	-105.6780113	43.07273568	15	4/6/11
A	10	-105.6779815	43.07003435	15	
A	12	-105.6761245	43.06869458	15	
A	14	-105.6761541	43.07139591	15	
A	16	-105.6761838	43.07409725	15	↓
A	18	-105.6762135	43.07679859	15	4/7/11
A	20	-105.6762432	43.07949992	15	
A	22	-105.676273	43.08220125	15	
A	25	-105.6744452	43.08356279	15	
A	27	-105.6744156	43.08086146	15	
A	29	-105.6743859	43.07816013	15	
A	31	-105.6743563	43.07545879	15	✓
A	33	-105.6743267	43.07275745	15	4/6/11
A	35	-105.6742971	43.07005612	15	
A	37	-105.6724401	43.06871629	15	
A	39	-105.6724696	43.07141763	15	
A	41	-105.6724992	43.07411896	15	✓
A	43	-105.6725287	43.0768203	15	4/7/11
A	45	-105.6725582	43.07952164	15	
A	47	-105.6725878	43.08222297	15	↓
A	49	-105.6726173	43.0849243	15	4/6/11
A	51	-105.6707599	43.08358445	15	4/7/11
A	53	-105.6707305	43.08088312	15	
A	55	-105.670701	43.07818178	15	
A	57	-105.6706716	43.07548045	15	✓
A	59	-105.6706421	43.07277911	15	4/6/11
A	61	-105.6706126	43.07007777	15	
A	64	-105.6687851	43.07143922	15	
A	66	-105.6688145	43.07414056	15	
A	68	-105.6688439	43.0768419	15	
A	70	-105.6688732	43.07954324	15	
A	72	-105.6689026	43.08224457	15	
A	74	-105.668932	43.08494591	15	
A	77	-105.6670747	43.083606	15	
A	79	-105.6670454	43.08090466	15	
A	81	-105.6670161	43.07820332	15	
A	83	-105.6669868	43.07550198	15	
A	85	-105.6669575	43.07280064	15	
A	87	-105.665159	43.07686338	15	
A	89	-105.6651882	43.07956472	15	
A	91	-105.6652175	43.08226606	15	
A	94	-105.6633603	43.08092608	15	✓

## ANALYTICAL SUMMARY REPORT

June 17, 2011

Power Resources dba Cameco Resources  
762 Ross Rd (Douglas, WY 82633)  
Glenrock, WY 82637

Workorder No.: C11040291

Project Name: 11-4025 Mine Unit 7-8

Energy Laboratories, Inc. Casper WY received the following 88 samples for Power Resources dba Cameco Resources on 4/7/2011 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C11040291-001	B1 @ 5	04/04/11 00:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-002	B3 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-003	B5 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-004	B6 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-005	B8 @ 5	04/04/11 00:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-006	B10 @ 5	04/04/11 00:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-007	B12 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-008	B14 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-009	B16 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-010	B18 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-011	B20 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-012	B21 @ 5	04/04/11 00:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-013	B23 @ 5	04/04/11 00:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-014	B25 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-015	B27 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-016	B29 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-017	B31 @ 5	04/04/11 00:00	04/07/11	Soil	Same As Above
C11040291-018	B32 @ 5	04/05/11 00:00	04/07/11	Soil	Same As Above
C11040291-019	B34 @ 5	04/05/11 00:00	04/07/11	Soil	Same As Above
C11040291-020	B36 @ 5	04/05/11 00:00	04/07/11	Soil	Same As Above
C11040291-021	B38 @ 5	04/05/11 00:00	04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040291-022	B40 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-023	B42 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-024	B44 @ 5	04/05/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-025	B45 @ 5	04/06/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-026	B47 @ 5	04/06/11 00:00 04/07/11	Soil	Same As Above
C11040291-027	B49 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-028	B51 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-029	B53 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-030	B55 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-031	B57 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-032	B60 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-033	B62 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-034	B64 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-035	B66 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-036	B68 @ 5	04/05/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-037	B70 @ 5	04/06/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-038	B72 @ 5	04/06/11 00:00 04/07/11	Soil	Same As Above
C11040291-039	B74 @ 5	04/06/11 00:00 04/07/11	Soil	Same As Above
C11040291-040	B76 @ 5	04/06/11 00:00 04/07/11	Soil	Same As Above
C11040291-041	B78 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-042	B80 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-043	B82 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-044	B84 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-045	B86 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-046	B88 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-047	B90 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-048	B92 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-049	B94 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-050	B96 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-051	B98 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-052	B100 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040291-053	B102 @ 5	04/06/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-054	B104 @ 5	04/06/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-055	B105 @ 5	04/06/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-056	B107 @ 5	04/05/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-057	B109 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-058	B110 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-059	B112 @ 5	04/05/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-060	B114 @ 5	04/05/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-061	B116 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-062	B118 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-063	B120 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-064	B122 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-065	B124 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-066	B126 @ 5	04/05/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-067	B128 @ 5	04/06/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-068	B129 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-069	B131 @ 5	04/05/11 00:00 04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040291-070	B133 @ 5	04/05/11 00:00 04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040291-071	B135 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-072	B137 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-073	B139 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040291-074	B141 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-075	B143 @ 5	04/05/11 00:00 04/07/11	Soil	Same As Above
C11040291-076	B146 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-077	B148 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-078	B150 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-079	B152 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-080	B154 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-081	B156 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-082	B158 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-083	B159 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-084	B161 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-085	B163 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-086	B166 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-087	B168 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above
C11040291-088	B169 @ 5	04/04/11 00:00 04/07/11	Soil	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

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

Report Approved By:

*Stephanie D Waldrop*  
 Reporting Supervisor

Digitally signed by  
 Stephanie Waldrop  
 Date: 2011.06.17 16:29:27 -06:00



**CLIENT:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit 7-8

**Sample Delivery Group:** C11040291

**Report Date:** 06/17/11

## CASE NARRATIVE

### TH230 ANALYSIS

USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### BRANCH LABORATORY SUBCONTRACT ANALYSIS

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-001  
**Client Sample ID:** B1 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-002  
**Client Sample ID:** B3 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-003  
**Client Sample ID:** B5 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-004  
**Client Sample ID:** B6 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-005  
**Client Sample ID:** B8 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	0.91	mg/kg-dry		0.02		SW6020	04/19/11 19:07 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.2	pCi/g-dry	U		E909.0		05/21/11 07:50 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry			E909.0		05/21/11 07:50 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry			E909.0		05/21/11 07:50 / eli-cs
Thorium 230	0.3	pCi/g-dry	U		E908.0		05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry			E908.0		05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry			E908.0		05/12/11 12:55 / dmf
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3	E901.1		05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry			E901.1		05/17/11 10:30 / plj

**Lab ID:** C11040291-006  
**Client Sample ID:** B10 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3	E901.1		05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry			E901.1		05/17/11 10:30 / plj

**Lab ID:** C11040291-007  
**Client Sample ID:** B12 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3	E901.1		05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry			E901.1		05/17/11 10:30 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-008  
**Client Sample ID:** B14 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-009  
**Client Sample ID:** B16 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-010  
**Client Sample ID:** B18 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-011  
**Client Sample ID:** B20 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-012  
**Client Sample ID:** B21 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.28	mg/kg-dry		0.02		SW6020	04/19/11 19:33 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.7	pCi/g-dry				E909.0	05/21/11 10:02 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 10:02 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 10:02 / eli-cs
Thorium 230	0.6	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-013  
**Client Sample ID:** B23 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-014  
**Client Sample ID:** B25 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-015  
**Client Sample ID:** B27 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-016  
**Client Sample ID:** B29 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-017  
**Client Sample ID:** B31 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-018  
**Client Sample ID:** B32 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-019  
**Client Sample ID:** B34 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-020  
**Client Sample ID:** B36 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-021  
**Client Sample ID:** B38 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-022  
**Client Sample ID:** B40 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-023  
**Client Sample ID:** B42 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-024  
**Client Sample ID:** B44 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.52	mg/kg-dry		0.02		SW6020	04/19/11 19:39 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.6	pCi/g-dry				E909.0	05/21/11 12:13 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 12:13 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 12:13 / eli-cs
Thorium 230	0.7	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf

### RADIONUCLIDES - GAMMA

Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-025  
**Client Sample ID:** B45 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-026  
**Client Sample ID:** B47 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-027  
**Client Sample ID:** B49 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-028  
**Client Sample ID:** B51 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-029  
**Client Sample ID:** B53 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-030  
**Client Sample ID:** B55 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-031  
**Client Sample ID:** B57 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-032  
**Client Sample ID:** B60 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-033  
**Client Sample ID:** B62 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-034  
**Client Sample ID:** B64 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-035  
**Client Sample ID:** B66 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.3	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.1	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-036  
**Client Sample ID:** B68 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.04	mg/kg-dry		0.02		SW6020	04/19/11 19:44 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.4	pCi/g-dry				E909.0	05/21/11 14:25 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 14:25 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 14:25 / eli-cs
Thorium 230	0.2	pCi/g-dry	U			E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-037  
**Client Sample ID:** B70 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-038  
**Client Sample ID:** B72 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-039  
**Client Sample ID:** B74 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-040  
**Client Sample ID:** B76 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-041  
**Client Sample ID:** B78 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-042  
**Client Sample ID:** B80 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-043  
**Client Sample ID:** B82 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.2	pCi/g-dry	U	0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Lab ID:** C11040291-044  
**Client Sample ID:** B84 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/17/11 10:30 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/17/11 10:30 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
U - Not detected at minimum detectable concentration

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-045  
**Client Sample ID:** B86 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-046  
**Client Sample ID:** B88 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-047  
**Client Sample ID:** B90 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-048  
**Client Sample ID:** B92 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-049  
**Client Sample ID:** B94 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-050  
**Client Sample ID:** B96 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-051  
**Client Sample ID:** B98 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.1	pCi/g-dry	U	0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.1	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-052  
**Client Sample ID:** B100 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
U - Not detected at minimum detectable concentration

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-053  
**Client Sample ID:** B102 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.39	mg/kg-dry		0.02		SW6020	04/19/11 19:49 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.8	pCi/g-dry				E909.0	05/21/11 16:36 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 16:36 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 16:36 / eli-cs
Thorium 230	0.7	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-054  
**Client Sample ID:** B104 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-055  
**Client Sample ID:** B105 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	2.45	mg/kg-dry		0.02		SW6020	04/19/11 19:54 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	1.6	pCi/g-dry				E909.0	05/21/11 18:47 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 18:47 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 18:47 / eli-cs
Thorium 230	1.8	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.5	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-056  
**Client Sample ID:** B107 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-057  
**Client Sample ID:** B109 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-058  
**Client Sample ID:** B110 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-059  
**Client Sample ID:** B112 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	0.96	mg/kg-dry		0.02		SW6020	04/19/11 19:59 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	1	pCi/g-dry				E909.0	05/21/11 20:59 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 20:59 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 20:59 / eli-cs
Thorium 230	0.4	pCi/g-dry	U			E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 12:55 / dmf

- See Case Narrative regarding Th230 analysis.

### RADIONUCLIDES - GAMMA

Radium 226	1.0	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-060  
**Client Sample ID:** B114 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**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.  
U - Not detected at minimum detectable concentration



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-061  
**Client Sample ID:** B116 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-062  
**Client Sample ID:** B118 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-063  
**Client Sample ID:** B120 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-064  
**Client Sample ID:** B122 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-065  
**Client Sample ID:** B124 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-066  
**Client Sample ID:** B126 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.19	mg/kg-dry		0.02		SW6020	04/19/11 20:05 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.2	pCi/g-dry	U			E909.0	05/21/11 23:10 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/21/11 23:10 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/21/11 23:10 / eli-cs
Thorium 230	0.3	pCi/g-dry	U			E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf

- See Case Narrative regarding Th230 analysis.

### RADIONUCLIDES - GAMMA

Radium 226	0.6	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-067  
**Client Sample ID:** B128 @ 5

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**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.  
U - Not detected at minimum detectable concentration

**LABORATORY ANALYTICAL REPORT**

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-068  
**Client Sample ID:** B129 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-069  
**Client Sample ID:** B131 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.63	mg/kg-dry		0.02		SW6020	04/19/11 20:10 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.5	pCi/g-dry				E909.0	05/22/11 01:22 / eli-cs
Lead 210 precision (±)	0.2	pCi/g-dry				E909.0	05/22/11 01:22 / eli-cs
Lead 210 MDC	0.3	pCi/g-dry				E909.0	05/22/11 01:22 / eli-cs
Thorium 230	0.9	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 precision (±)	0.4	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:55 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-070  
**Client Sample ID:** B133 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**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.



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-071  
**Client Sample ID:** B135 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-072  
**Client Sample ID:** B137 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-073  
**Client Sample ID:** B139 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-074  
**Client Sample ID:** B141 @ 5

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-075  
**Client Sample ID:** B143 @ 5

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-076  
**Client Sample ID:** B146 @ 5

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-077  
**Client Sample ID:** B148 @ 5

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-078  
**Client Sample ID:** B150 @ 5

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-079  
**Client Sample ID:** B152 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-080  
**Client Sample ID:** B154 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-081  
**Client Sample ID:** B156 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-082  
**Client Sample ID:** B158 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-083

**Collection Date:** 04/04/11

**Client Sample ID:** B159 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-084

**Collection Date:** 04/04/11

**Client Sample ID:** B161 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-085

**Collection Date:** 04/04/11

**Client Sample ID:** B163 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-086

**Collection Date:** 04/04/11

**Client Sample ID:** B166 @ 5

**Date Received:** 04/07/11

**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Lab ID:** C11040291-087  
**Client Sample ID:** B168 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	11.7	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	1.0	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Lab ID:** C11040291-088  
**Client Sample ID:** B169 @ 5

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	06/09/11 09:55 / dpb
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	06/09/11 09:55 / dpb

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 06/17/11

**Project:** 11-4025 Mine Unit 7-8

**Work Order:** C11040291

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: 29547
<b>Sample ID: LCS-R146243</b>	Laboratory Control Sample									Run: GAM-HPGE_110517A 05/17/11 10:30
Bismuth 214		8.10	pCi/g-dry	0.30	93	70	130			
<b>Sample ID: MB-R146243</b>	2	Method Blank								Run: GAM-HPGE_110517A 05/17/11 10:30
Radium 226		ND	pCi/g-dry	0.30						U
Radium 226 precision (±)		ND	pCi/g-dry							
<b>Sample ID: C11040291-010ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110517A 05/17/11 10:30
Radium 226		1.10	pCi/g-dry	0.30				8.7	20	
Radium 226 precision (±)		0.400	pCi/g-dry							
<b>Sample ID: C11040291-020ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110517A 05/17/11 10:30
Radium 226		1.00	pCi/g-dry	0.30				0.0	20	
Radium 226 precision (±)		0.500	pCi/g-dry							
<b>Method: E901.1</b>										Batch: R146939
<b>Sample ID: LCS-R146939</b>	Laboratory Control Sample									Run: GAM-HPGE_110609A 06/09/11 09:55
Bismuth 214		8.10	pCi/g-dry	0.30	93	70	130			
<b>Sample ID: MB-R146939</b>	2	Method Blank								Run: GAM-HPGE_110609A 06/09/11 09:55
Radium 226		ND	pCi/g-dry	0.30						U
Radium 226 precision (±)		ND	pCi/g-dry							
<b>Sample ID: C11040291-080ADUP</b>	2	Sample Duplicate								Run: GAM-HPGE_110609A 06/09/11 09:55
Radium 226		1.50	pCi/g-dry	0.30				6.9	20	
Radium 226 precision (±)		0.500	pCi/g-dry							
<b>Sample ID: BLKSPK1</b>	Laboratory Control Sample									Run: GAM-HPGE_110609A 06/09/11 09:55
Bismuth 214		7.30	pCi/g-dry	0.30	84	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Power Resources dba Cameco Resources

Report Date: 06/17/11

Project: 11-4025 Mine Unit 7-8

Work Order: C11040291

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: 29594
Sample ID: C11040291-069AMS	Sample Matrix Spike			Run: EGG-ORTEC_110510B			05/12/11 12:55			
Thorium 230		27.3	pCi/g-dry	111		70	130			
Sample ID: C11040291-069AMSD	Sample Matrix Spike Duplicate			Run: EGG-ORTEC_110510B			05/12/11 12:55			
Thorium 230		25.8	pCi/g-dry	110		70	130	5.7	45.1	
Sample ID: LCS-29594	Laboratory Control Sample			Run: EGG-ORTEC_110510B			05/12/11 12:55			
Thorium 230		1.05	pCi/g-dry	105		70	130			
Sample ID: MB-29594	3	Method Blank			Run: EGG-ORTEC_110510B			05/12/11 12:55		
Thorium 230		0.0222	pCi/g-dry							U
Thorium 230 precision (±)		0.0190	pCi/g-dry							
Thorium 230 MDC		0.0256	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 06/17/11

**Project:** 11-4025 Mine Unit 7-8

**Work Order:** C11040291

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_13935	
Sample ID: C11040291-069AMSD	Sample Matrix Spike Duplicate					Run: SUB-T40471			05/22/11 05:45	
Lead 210		13.6	pCi/g-dry	84	70	130	7.8	17.3		
Sample ID: C11040291-069AMS	Sample Matrix Spike					Run: SUB-T40471			05/22/11 03:33	
Lead 210		12.5	pCi/g-dry	73	70	130				
Sample ID: LCS-13935	Laboratory Control Sample					Run: SUB-T40471			05/20/11 07:44	
Lead 210		30.7	pCi/g-dry	89	70	130				
Sample ID: MB-13935	3	Method Blank					Run: SUB-T40471			05/20/11 05:32
Lead 210		0.486	pCi/g-dry							U
Lead 210 precision (±)		0.649	pCi/g-dry							
Lead 210 MDC		1.08	pCi/g-dry							

### Qualifiers:

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Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/17/11

**Work Order:** C11040291

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020</b>										Batch: 29594
<b>Sample ID: MB-29594</b>										
Method Blank										
Run: ICPMS2-C_110419A										
04/19/11 17:33										
Uranium		ND	mg/kg-dry	0.020						
<b>Sample ID: LCS2-29594</b>										
Laboratory Control Sample										
Run: ICPMS2-C_110419A										
04/19/11 17:39										
Uranium	4.97		mg/kg-dry	0.015	99	75	125			
<b>Sample ID: C11040291-069AMS</b>										
Sample Matrix Spike										
Run: ICPMS2-C_110419A										
04/19/11 20:15										
Uranium	2.78		mg/kg-dry	0.015	94	75	125			
<b>Sample ID: C11040291-069AMSD</b>										
Sample Matrix Spike Duplicate										
Run: ICPMS2-C_110419A										
04/19/11 20:41										
Uranium	2.67		mg/kg-dry	0.015	89	75	125	4.3	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

# Workorder Receipt Checklist



Power Resources dba Cameco Resources

C11040291

Login completed by: Corinne Wagner

Date Received: 4/7/2011

Reviewed by: BL2000\hackerman

Received by: em

Reviewed Date: 4/11/2011

Carrier Hand Del  
name:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on 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?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	N/A °C		
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"/>

Contact and Corrective Action Comments:

None



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>			Project Name, PWS, Permit, Etc. <u>11-4025 (MINE UNIT 7-8)</u>			Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>											
Report Mail Address: <u>913 Foster Rd, Casper WY</u>			Contact Name: <u>Dane Odle / John McCarthy</u>		Phone/Fax: <u></u>		Email: <u>dodle@westair.com</u>		Sampler: (Please Print) <u>D. Odle</u>										
Invoice Address: <u>PO Box 1210 Glenrock WY 82637</u>			Invoice Contact & Phone: <u>Cameco Resources (307) 358-6541</u>			Purchase Order:		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 <input type="checkbox"/> 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										R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page	Shipped by: <u>Hand</u>			
				SEE ATTACHED												Cooler ID(s): <u>6/11/11</u>			
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date	Collection Time	MATRIX	Normal Turnaround (TAT)										Comments:		Receipt Temp <u>W/L</u> °C	
1 See attached Spreadsheet					S	X										On ice: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Custody Seal Y <input checked="" type="checkbox"/>		
2																	Bottles/ Coolers B C		
3 B8 @ 5						X	X	X	X								Intact Y N		
4 B8 @ 15						X	X	X	X								Signature Y N		
5 B21 @ 5						X	X	X	X								Match Y N		
6 B21 @ 15						X	X	X	X										
7 B44 @ 5						X	X	X	X										
8 B44 @ 15						X	X	X	X										
9 B68 @ 5						X	X	X	X										
10 B68 @ 15						X	X	X	X										
Custody Record MUST be Signed			Relinquished by (print): <u>Dane Odle</u>		Date/Time: <u>7/6/11 1100</u>	Signature: <u>John McCarthy</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>7/6/11 1100</u>	Signature: <u>John McCarthy</u>		LABORATORY USE ONLY						
			Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1640</u>	Signature: <u>John McCarthy</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>7/7/11 1640</u>	Signature: <u>John McCarthy</u>								
			Sample Disposal: _____		Return to Client: _____		Lab Disposal: _____		Received by Laboratory: <u>G. M. P. K.</u>		Date/Time: <u>7/7/11 1640</u>	Signature: <u>John McCarthy</u>							

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 noted on your analytical report.

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Page 2 of 2

**PLEASE PRINT.** Provide as much information as possible.

Company Name: <b>Western Environmental</b>			Project Name, PWS, Permit, Etc. <b>11-4025 (Mine Unit 7-8)</b>			Sample Origin State:			EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>												
Report Mail Address: <b>913 Foster Rd, Casper, WY</b>			Contact Name: <b>Dave Odde</b>			Phone/Fax: <b>234-5511</b>			Email: <b>dodde@tccstar.com</b>			Sampler: (Please Print) <b>d. Odde</b>									
Invoice Address: <b>PO Box 1210, Glenrock WY</b>			Invoice Contact & Phone: <b>John McCarthy, Casper Res. (307) 338-6571</b>						Purchase Order:			Quote/Bottle Order:									
Special Report/Formats - ELI must be notified prior to sample submittal for the following:  <div><input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: <input type="checkbox"/> Other:</div> <div><input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC</div>			Number of Containers Sample Type: A W S V B O Air Water Soils/Solids Vegetation Bioassay Other			ANALYSIS REQUESTED										Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page  Comments:			Shipped by: <b>Hand</b>		
						SEE ATTACHED													Normal Turnaround (TAT)		
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date		Collection Time		MATRIX		R		U		S		H		Receipt Temp <b>17.2</b> °C				
1 B 102 e 5			See attached				S		Radiation 226		Natural uranium		Thorium 230		Lead 210		On Ice: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
2 B 102 e 15			Spreadsheet						X		X		X		X		Custody Seal Y <input checked="" type="checkbox"/>				
3 B 105 e 5									X		X		X		X		Bottles/ Coolers B C				
4 B 105 e 15									X		X		X		X		Intact Y N				
5 B 112 e 5									X		X		X		X		Signature Y N				
6 B 112 e 15									X		X		X		X		Match Y N				
7 B 126 e 5									X		X		X		X						
8 B 126 e 15									X		X		X		X						
9 B 131 e 5									X		X		X		X						
10 B 131 e 15									X		X		X		X						
Custody Record MUST be Signed			Relinquished by (print): <b>Dave Odde</b>		Date/Time: <b>4/16/11 1100</b>		Signature: <b>Dave Odde</b>		Received by (print): <b>John McCarthy</b>		Date/Time: <b>4/16/11 1100</b>		Signature: <b>John McCarthy</b>		Received by Laboratory: <b>John McCarthy</b>		Date/Time: <b>4/17/11 16:41</b>		Signature: <b>John McCarthy</b>		
			Relinquished by (print): <b>John McCarthy</b>		Date/Time: <b>4/17/11 1640</b>		Signature: <b>John McCarthy</b>		Received by (print):		Date/Time:		Signature:		Received by Laboratory:		Date/Time:		Signature:		
Sample Disposal:			Return to Client:			Lab Disposal:															

**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.

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11/12/15

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Study Area	Point	X	Y	Depth	Date Collected
B	1	-105.7263584	43.05855953	5	4/4/2011
B	3	-105.7245006	43.05722055	5	
B	5	-105.7245324	43.05992187	5	
B	6	-105.7227064	43.06128417	5	
B	8	-105.7226747	43.05858285	5	
B	10	-105.722643	43.05588154	5	
B	12	-105.7207537	43.05184117	5	
B	14	-105.7207854	43.05454249	5	
B	16	-105.720817	43.05724381	5	
B	18	-105.7208486	43.05994513	5	
B	20	-105.7208803	43.06264645	5	
B	21	-105.7190541	43.06400869	5	
B	23	-105.7190225	43.06130738	5	
B	25	-105.718991	43.05860606	5	
B	27	-105.7189594	43.05590474	5	
B	29	-105.7189278	43.05320342	5	
B	31	-105.7188963	43.0505021	5	
B	32	-105.7170389	43.04916299	5	4/5/2011
B	34	-105.7170704	43.05186431	5	
B	36	-105.7171019	43.05456564	5	
B	38	-105.7171334	43.05726696	5	
B	40	-105.7171648	43.05996828	5	
B	42	-105.7171963	43.06266959	5	
B	44	-105.7172278	43.06537091	5	
B	45	-105.7154015	43.0667331	5	4/6/2011
B	47	-105.7153701	43.06403178	5	
B	49	-105.7153386	43.06133046	5	4/5/2011
B	51	-105.7153072	43.05862914	5	
B	53	-105.7152758	43.05592782	5	
B	55	-105.7152445	43.0532265	5	
B	57	-105.7152131	43.05052518	5	
B	60	-105.7133558	43.04918601	5	
B	62	-105.7133871	43.05188734	5	
B	64	-105.7134184	43.05458866	5	
B	66	-105.7134497	43.05728998	5	
B	68	-105.713481	43.0599913	5	
B	70	-105.7135124	43.06269262	5	4/6/2011
B	72	-105.7135437	43.06539394	5	
B	74	-105.7117173	43.06675607	5	
B	76	-105.711686	43.06405475	5	
B	78	-105.7116548	43.06135343	5	4/5/2011
B	80	-105.7116235	43.05865211	5	
B	82	-105.7115923	43.05595079	5	
B	84	-105.7115611	43.05324946	5	
B	86	-105.7115298	43.05054814	5	
B	88	-105.7114986	43.04784681	5	

B	90	-105.7096415	43.04650758	5	4/5/2011
B	92	-105.7096726	43.04920891	5	
B	94	-105.7097038	43.05191024	5	
B	96	-105.7097349	43.05461156	5	
B	98	-105.7097661	43.05731289	5	
B	100	-105.7097972	43.06001421	5	
B	102	-105.7098284	43.06271553	5	4/6/2011
B	104	-105.7098596	43.06541686	5	
B	105	-105.708002	43.06407761	5	
B	107	-105.7079709	43.06137628	5	4/5/2011
B	109	-105.7079398	43.05867496	5	
B	110	-105.7079087	43.05597364	5	
B	112	-105.7078777	43.05327231	5	
B	114	-105.7078466	43.05057098	5	
B	116	-105.7078155	43.04786965	5	
B	118	-105.7059585	43.04653036	5	
B	120	-105.7059895	43.04923169	5	
B	122	-105.7060205	43.05193302	5	
B	124	-105.7060514	43.05463435	5	
B	126	-105.7061134	43.060037	5	
B	128	-105.7061444	43.06273833	5	4/6/2011
B	129	-105.7042252	43.05599636	5	4/5/2011
B	131	-105.7041943	43.05329503	5	
B	133	-105.7041633	43.0505937	5	
B	135	-105.7041324	43.04789237	5	
B	137	-105.7022755	43.04655302	5	
B	139	-105.7023063	43.04925436	5	
B	141	-105.7023371	43.05195569	5	
B	143	-105.702368	43.05465702	5	4/5/2011
B	146	-105.7005108	43.05331764	5	4/4/2011
B	148	-105.7004801	43.05061631	5	
B	150	-105.7004494	43.04791498	5	
B	152	-105.6985925	43.04657557	5	
B	154	-105.6986231	43.0492769	5	
B	156	-105.6986538	43.05197823	5	
B	158	-105.6986845	43.05467957	5	
B	159	-105.6968274	43.05334013	5	
B	161	-105.6967968	43.0506388	5	
B	163	-105.6967663	43.04793746	5	
B	166	-105.69494	43.04929933	5	
B	168	-105.6949705	43.05200066	5	
B	169	-105.6931136	43.05066116	5	

## ANALYTICAL SUMMARY REPORT

June 10, 2011

Power Resources dba Cameco Resources  
762 Ross Rd (Douglas, WY 82633)  
Glenrock, WY 82637

Workorder No.: C11040295

Project Name: 11-4025 Mine Unit 7-8

Energy Laboratories, Inc. Casper WY received the following 88 samples for Power Resources dba Cameco Resources on 4/7/2011 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C11040295-001	B1 @ 15	04/04/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-002	B3 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-003	B5 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-004	B6 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-005	B8 @ 15	04/04/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-006	B10 @ 15	04/04/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-007	B12 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-008	B14 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-009	B16 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-010	B18 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-011	B20 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-012	B21 @ 15	04/04/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-013	B23 @ 15	04/04/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-014	B25 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-015	B27 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-016	B29 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-017	B31 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-018	B32 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-019	B34 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-020	B36 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-021	B38 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040295-022	B40 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-023	B42 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-024	B44 @ 15	04/05/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-025	B45 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-026	B47 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040295-027	B49 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-028	B51 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-029	B53 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-030	B55 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-031	B57 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-032	B60 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-033	B62 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-034	B64 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-035	B66 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-036	B68 @ 15	04/05/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-037	B70 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-038	B72 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040295-039	B74 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040295-040	B76 @ 15	04/06/11 0:00	04/07/11	Soil	Same As Above
C11040295-041	B78 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-042	B80 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-043	B82 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-044	B84 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-045	B86 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-046	B88 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-047	B90 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-048	B92 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-049	B94 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-050	B96 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-051	B98 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-052	B100 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above

## ANALYTICAL SUMMARY REPORT

C11040295-053	B102 @ 15	04/06/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-054	B104 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-055	B105 @ 15	04/06/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-056	B107 @ 15	04/05/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-057	B109 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-058	B110 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-059	B112 @ 15	04/05/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-060	B114 @ 15	04/05/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-061	B116 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-062	B118 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-063	B120 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-064	B122 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-065	B124 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-066	B126 @ 15	04/05/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-067	B128 @ 15	04/06/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-068	B129 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-069	B131 @ 15	04/05/11 0:00	04/07/11	Soil	Uranium, Total Digestion For RadioChemistry Gamma Sample Preparation Gross Gamma Lead 210 Thorium, Isotopic
C11040295-070	B133 @ 15	04/05/11 0:00	04/07/11	Soil	Gamma Sample Preparation Gross Gamma
C11040295-071	B135 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-072	B137 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-073	B139 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above

**ANALYTICAL SUMMARY REPORT**

C11040295-074	B141 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-075	B143 @ 15	04/05/11 0:00	04/07/11	Soil	Same As Above
C11040295-076	B146 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-077	B148 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-078	B150 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-079	B152 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-080	B154 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-081	B156 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-082	B158 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-083	B159 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-084	B161 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-085	B163 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-086	B166 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-087	B168 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above
C11040295-088	B169 @ 15	04/04/11 0:00	04/07/11	Soil	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

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

Report Approved By:

*Stephanie D Waldrop*  
Reporting Supervisor

Digitally signed by  
Stephanie Waldrop  
Date: 2011.06.10 09:48:32 -06:00



**CLIENT:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8  
**Sample Delivery Group:** C11040295

**Report Date:** 06/10/11

## CASE NARRATIVE

### TH230 ANALYSIS

USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### BRANCH LABORATORY SUBCONTRACT ANALYSIS

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-001  
**Client Sample ID:** B1 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-002  
**Client Sample ID:** B3 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-003  
**Client Sample ID:** B5 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-004  
**Client Sample ID:** B6 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-005  
**Client Sample ID:** B8 @ 15

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	0.87	mg/kg-dry		0.02		SW6020	04/19/11 21:23 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.07	pCi/g-dry	U			E909.0	06/03/11 23:26 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/03/11 23:26 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/03/11 23:26 / eli-cs
Thorium 230	0.3	pCi/g-dry	U			E908.0	05/12/11 12:57 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-006  
**Client Sample ID:** B10 @ 15

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-007  
**Client Sample ID:** B12 @ 15

**Collection Date:** 04/04/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-008  
**Client Sample ID:** B14 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-009  
**Client Sample ID:** B16 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-010  
**Client Sample ID:** B18 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-011  
**Client Sample ID:** B20 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-012  
**Client Sample ID:** B21 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.35	mg/kg-dry		0.02		SW6020	04/19/11 21:55 / smf
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.5	pCi/g-dry				E909.0	06/04/11 01:38 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 01:38 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 01:38 / eli-cs
Thorium 230	0.4	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
Thorium 230 MDC	0.2	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-013  
**Client Sample ID:** B23 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-014  
**Client Sample ID:** B25 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-015  
**Client Sample ID:** B27 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-016  
**Client Sample ID:** B29 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-017  
**Client Sample ID:** B31 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-018  
**Client Sample ID:** B32 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-019  
**Client Sample ID:** B34 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-020  
**Client Sample ID:** B36 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-021  
**Client Sample ID:** B38 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-022  
**Client Sample ID:** B40 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-023  
**Client Sample ID:** B42 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-024  
**Client Sample ID:** B44 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.14	mg/kg-dry		0.02		SW6020	04/19/11 22:00 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.3	pCi/g-dry				E909.0	06/04/11 03:49 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 03:49 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 03:49 / eli-cs
Thorium 230	0.3	pCi/g-dry	U			E908.0	05/12/11 12:57 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry				E908.0	05/12/11 12:57 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/12/11 12:57 / dmf

- See Case Narrative regarding Th230 analysis.

### RADIONUCLIDES - GAMMA

Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-025  
**Client Sample ID:** B45 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-026  
**Client Sample ID:** B47 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-027  
**Client Sample ID:** B49 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-028  
**Client Sample ID:** B51 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.4	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-029  
**Client Sample ID:** B53 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-030  
**Client Sample ID:** B55 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-031  
**Client Sample ID:** B57 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-032  
**Client Sample ID:** B60 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-033  
**Client Sample ID:** B62 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-034  
**Client Sample ID:** B64 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-035  
**Client Sample ID:** B66 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-036  
**Client Sample ID:** B68 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.12	mg/kg-dry		0.02		SW6020	04/19/11 22:06 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.3	pCi/g-dry				E909.0	06/04/11 06:01 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 06:01 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 06:01 / eli-cs
Thorium 230	0.6	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 MDC	0.2	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-037  
**Client Sample ID:** B70 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-038  
**Client Sample ID:** B72 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-039  
**Client Sample ID:** B74 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-040  
**Client Sample ID:** B76 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-041  
**Client Sample ID:** B78 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-042  
**Client Sample ID:** B80 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-043  
**Client Sample ID:** B82 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-044  
**Client Sample ID:** B84 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-045  
**Client Sample ID:** B86 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-046  
**Client Sample ID:** B88 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-047  
**Client Sample ID:** B90 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-048  
**Client Sample ID:** B92 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-049  
**Client Sample ID:** B94 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-050  
**Client Sample ID:** B96 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-051  
**Client Sample ID:** B98 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-052  
**Client Sample ID:** B100 @ 15

**Collection Date:** 04/05/11  
**DateReceived:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-053  
**Client Sample ID:** B102 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.20	mg/kg-dry		0.02		SW6020	04/19/11 22:11 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.4	pCi/g-dry				E909.0	06/04/11 08:12 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 08:12 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 08:12 / eli-cs
Thorium 230	1.0	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.5	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-054  
**Client Sample ID:** B104 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-055  
**Client Sample ID:** B105 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	3.30	mg/kg-dry		0.02		SW6020	04/19/11 22:16 / smf
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	2.4	pCi/g-dry			E909.0		06/04/11 10:24 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry			E909.0		06/04/11 10:24 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry			E909.0		06/04/11 10:24 / eli-cs
Thorium 230	3.0	pCi/g-dry			E908.0		05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.8	pCi/g-dry			E908.0		05/13/11 08:48 / dmf
Thorium 230 MDC	0.3	pCi/g-dry			E908.0		05/13/11 08:48 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3	E901.1		05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry			E901.1		05/23/11 05:00 / plj

**Lab ID:** C11040295-056  
**Client Sample ID:** B107 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.8	pCi/g-dry		0.3	E901.1		05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry			E901.1		05/23/11 05:00 / plj

**Lab ID:** C11040295-057  
**Client Sample ID:** B109 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3	E901.1		05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry			E901.1		05/23/11 05:00 / plj

**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.



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-058  
**Client Sample ID:** B110 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-059  
**Client Sample ID:** B112 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	0.72	mg/kg-dry		0.02		SW6020	04/19/11 22:21 / smf
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.2	pCi/g-dry	U			E909.0	06/04/11 12:35 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 12:35 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 12:35 / eli-cs
Thorium 230	0.3	pCi/g-dry	U			E908.0	05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.2	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/13/11 08:48 / dmf

- See Case Narrative regarding Th230 analysis.

### RADIONUCLIDES - GAMMA

Radium 226	1.4	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-060  
**Client Sample ID:** B114 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	3.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.8	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-061  
**Client Sample ID:** B116 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-062  
**Client Sample ID:** B118 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-063  
**Client Sample ID:** B120 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-064  
**Client Sample ID:** B122 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-065  
**Client Sample ID:** B124 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-066  
**Client Sample ID:** B126 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	1.09	mg/kg-dry		0.02		SW6020	04/19/11 22:26 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.2	pCi/g-dry	U			E909.0	06/04/11 14:47 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 14:47 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 14:47 / eli-cs
Thorium 230	0.5	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 MDC	0.3	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-067  
**Client Sample ID:** B128 @ 15

**Collection Date:** 04/06/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.  
U - Not detected at minimum detectable concentration



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-068  
**Client Sample ID:** B129 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.8	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-069  
**Client Sample ID:** B131 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>METALS - TOTAL</b>							
Uranium	2.04	mg/kg-dry		0.02		SW6020	04/19/11 22:32 / sml
<b>RADIONUCLIDES - TOTAL</b>							
Lead 210	0.5	pCi/g-dry				E909.0	06/04/11 16:58 / eli-cs
Lead 210 precision (±)	0.1	pCi/g-dry				E909.0	06/04/11 16:58 / eli-cs
Lead 210 MDC	0.2	pCi/g-dry				E909.0	06/04/11 16:58 / eli-cs
Thorium 230	0.6	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 precision (±)	0.3	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
Thorium 230 MDC	0.4	pCi/g-dry				E908.0	05/13/11 08:48 / dmf
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-070  
**Client Sample ID:** B133 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**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.



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-071  
**Client Sample ID:** B135 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-072  
**Client Sample ID:** B137 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-073  
**Client Sample ID:** B139 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	5.2	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.7	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-074  
**Client Sample ID:** B141 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-075  
**Client Sample ID:** B143 @ 15

**Collection Date:** 04/05/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-076  
**Client Sample ID:** B146 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-077  
**Client Sample ID:** B148 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.0	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-078  
**Client Sample ID:** B150 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	1.2	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-079  
**Client Sample ID:** B152 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-080  
**Client Sample ID:** B154 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	0.6	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.2	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-081  
**Client Sample ID:** B156 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.7	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-082  
**Client Sample ID:** B158 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.3	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-083  
**Client Sample ID:** B159 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.3	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-084  
**Client Sample ID:** B161 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	2.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.6	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-085  
**Client Sample ID:** B163 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.5	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-086  
**Client Sample ID:** B166 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.5	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources  
**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Lab ID:** C11040295-087  
**Client Sample ID:** B168 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	6.9	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.9	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Lab ID:** C11040295-088  
**Client Sample ID:** B169 @ 15

**Collection Date:** 04/04/11  
**Date Received:** 04/07/11  
**Matrix:** Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>RADIONUCLIDES - GAMMA</b>							
Radium 226	1.1	pCi/g-dry		0.3		E901.1	05/23/11 05:00 / plj
Radium 226 precision (±)	0.4	pCi/g-dry				E901.1	05/23/11 05:00 / plj

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.

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

## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Project:** 11-4025 Mine Unit 7-8

**Report Date:** 06/10/11

**Work Order:** C11040295

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1								Batch: R146569		
Sample ID: LCS-R146569		Laboratory Control Sample					Run: GAM-HPGE_110523B		05/23/11 05:00	
Bismuth 214		7.90	pCi/g-dry	0.30	91	70	130			
- LCS sample uses Bi214 for Ra226.										
Sample ID: MB-R146569		Method Blank					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		ND	pCi/g-dry							U
Sample ID: C11040295-010ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		1.50	pCi/g-dry	0.30				0.0	20	
Radium 226 precision (±)		0.500	pCi/g-dry							
Sample ID: C11040295-020ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		0.900	pCi/g-dry	0.30				0.0	20	
Radium 226 precision (±)		0.400	pCi/g-dry							
Sample ID: C11040295-030ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		1.00	pCi/g-dry	0.30				22	20	R
Radium 226 precision (±)		0.300	pCi/g-dry							
- Duplicate RPD is outside of the acceptance range for this analysis.										
Sample ID: C11040295-040ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		1.40	pCi/g-dry	0.30				6.9	20	
Radium 226 precision (±)		0.700	pCi/g-dry							
Sample ID: C11040295-050ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		1.00	pCi/g-dry	0.30				35	20	R
Radium 226 precision (±)		0.400	pCi/g-dry							
- Duplicate RPD is outside of the acceptance range for this analysis.										
Sample ID: C11040295-060ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		3.80	pCi/g-dry	0.30				0.0	20	
Radium 226 precision (±)		0.900	pCi/g-dry							
Sample ID: C11040295-070ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		1.30	pCi/g-dry	0.30				21	20	R
Radium 226 precision (±)		0.400	pCi/g-dry							
- Duplicate RPD is outside of the acceptance range for this analysis.										
Sample ID: C11040295-080ADUP	2	Sample Duplicate					Run: GAM-HPGE_110523B		05/23/11 05:00	
Radium 226		0.100	pCi/g-dry	0.30					20	U
Radium 226 precision (±)		0.200	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 06/10/11

**Project:** 11-4025 Mine Unit 7-8

**Work Order:** C11040295

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>										Batch: 29595
<b>Sample ID: C11040295-069AMS</b>	Sample Matrix Spike									
Thorium 230		15.2	pCi/g-dry	128		70	130			Run: EGG-ORTEC_110510C 05/13/11 08:48
<b>Sample ID: C11040295-069AMSD</b>	Sample Matrix Spike Duplicate									
Thorium 230		14.2	pCi/g-dry	114		70	130	6.9	45.8	Run: EGG-ORTEC_110510C 05/13/11 08:48
<b>Sample ID: LCS-29595</b>	Laboratory Control Sample									
Thorium 230		1.21	pCi/g-dry	122		70	130			Run: EGG-ORTEC_110510C 05/13/11 08:48
<b>Sample ID: MB-29595</b>	3	Method Blank								
Thorium 230		0.02	pCi/g-dry							Run: EGG-ORTEC_110510C 05/13/11 08:48
Thorium 230 precision ( $\pm$ )		0.02	pCi/g-dry							U
Thorium 230 MDC		0.03	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 06/10/11

**Project:** 11-4025 Mine Unit 7-8

**Work Order:** C11040295

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>										Batch: T_13934
<b>Sample ID: T11040109-069AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T40679				06/04/11 21:21
Lead 210		15.5	pCi/g-dry	89		70	130	14		14.9
<b>Sample ID: T11040109-069AMS</b>		Sample Matrix Spike				Run: SUB-T40679				06/04/11 19:10
Lead 210		17.9	pCi/g-dry	103		70	130			
<b>Sample ID: LCS-13934</b>		Laboratory Control Sample				Run: SUB-T40679				06/03/11 21:15
Lead 210		26.7	pCi/g-dry	81		70	130			
<b>Sample ID: MB-13934</b>	3	Method Blank				Run: SUB-T40679				06/03/11 19:03
Lead 210		-0.2	pCi/g-dry							U
Lead 210 precision ( $\pm$ )		0.5	pCi/g-dry							
Lead 210 MDC		0.8	pCi/g-dry							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Casper, WY Branch

**Client:** Power Resources dba Cameco Resources

**Report Date:** 06/10/11

**Project:** 11-4025 Mine Unit 7-8

**Work Order:** C11040295

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020</b>										Batch: 29595
<b>Sample ID: MB-29595</b>	Method Blank									Run: ICPMS2-C_110419A 04/19/11 20:52
Uranium		ND	mg/kg-dry	3E-05						
<b>Sample ID: LCS2-29595</b>	Laboratory Control Sample									Run: ICPMS2-C_110419A 04/19/11 20:57
Uranium		4.92	mg/kg-dry	0.015	98	75	125			
<b>Sample ID: C11040295-069AMS</b>	Sample Matrix Spike									Run: ICPMS2-C_110419A 04/19/11 22:58
Uranium		3.41	mg/kg-dry	0.015	110	75	125			
<b>Sample ID: C11040295-069AMSD</b>	Sample Matrix Spike Duplicate									Run: ICPMS2-C_110419A 04/19/11 23:03
Uranium		3.40	mg/kg-dry	0.015	109	75	125	0.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## Workorder Receipt Checklist



Power Resources dba Cameco Resources

C11040295

Login completed by: Corinne Wagner

Date Received: 4/7/2011

Reviewed by: BL2000\emcpike

Received by: em

Reviewed Date: 4/18/2011

Carrier Hand Del  
name:

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on 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?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	N/A °C		
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"/>

Contact and Corrective Action Comments:

None



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>		Project Name, PWS, Permit, Etc. <u>11-4025 (MINE UNIT 7-8)</u>		Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>913 Foster Rd, Casper WY</u>		Contact Name: <u>Dane Olde / John McCarthy</u>		Phone/Fax: <u>307 358-6541</u>		Email: <u>dolde@tstair.com</u>	
Invoice Address: <u>PO Box 1210, Glenrock WY 82637</u>		Invoice Contact & Phone: <u>Cameco Resources (307) 358-6541</u>		Purchase Order:		Sampler: (Please Print) <u>D. Olde</u>	
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"/> POTWWWWTP <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC		Number of Containers Sample Type: <u>AWSVBO</u> Air Water Soils/Solids Vegetation Bioassay Other		ANALYSIS REQUESTED			
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX		SEE ATTACHED	
1 <u>See attached Spreadsheet</u>				<u>S</u>	<u>X</u>		
2							
3 <u>B8 @ 5</u>					<u>X</u>	<u>X</u>	<u>X</u>
4 <u>B8 @ 15</u>					<u>X</u>	<u>X</u>	<u>X</u>
5 <u>B21 @ 5</u>					<u>X</u>	<u>X</u>	<u>X</u>
6 <u>B21 @ 15</u>					<u>X</u>	<u>X</u>	<u>X</u>
7 <u>B44 @ 5</u>					<u>X</u>	<u>X</u>	<u>X</u>
8 <u>B44 @ 15</u>					<u>X</u>	<u>X</u>	<u>X</u>
9 <u>B68 @ 5</u>					<u>X</u>	<u>X</u>	<u>X</u>
10 <u>B68 @ 15</u>					<u>X</u>	<u>X</u>	<u>X</u>
Custody Record MUST be Signed		Relinquished by (print): <u>Dane Olde</u> Signature: <u>[Signature]</u> Date/Time: <u>7/6/11 1100</u>		Received by (print): <u>John McCarthy</u> Signature: <u>[Signature]</u> Date/Time: <u>4/6/11 1100</u>		Received by Laboratory: <u>[Signature]</u> Date/Time: <u>4/7/11 1640</u>	
		Relinquished by (print): <u>John McCarthy</u> Signature: <u>[Signature]</u> Date/Time: <u>4/7/11 1640</u>		Received by (print): <u>[Signature]</u> Date/Time: <u>4/7/11 1640</u>		Signature: <u>[Signature]</u>	
		Sample Disposal: <u>Return to Client</u>		Lab Disposal:			

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. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

11-062



# Chain of Custody and Analytical Request Record

Page 2 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>			Project Name, PWS, Permit, Etc. <u>11-4025 (Mine Unit 7-8)</u>			Sample Origin State:		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>											
Report Mail Address: <u>913 Foster Rd, Casper, WY</u>			Contact Name: <u>Dave Odde</u> Phone/Fax: <u>334-5511</u>			Email: <u>dodde@westair.com</u>		Sampler: (Please Print) <u>d. Odde</u>											
Invoice Address: <u>PO Box 1210, Glenrock WY</u>			Invoice Contact & Phone: <u>John McCarthy, Casper Res. (202) 358-6574</u>			Purchase Order:		Quota/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"/> POTWWTP <input type="checkbox"/> 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 Solids/Solids Vegetation Bioassay Other	ANALYSIS REQUESTED										Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by: <u>1700H</u> Cooler ID(s): <u>114916</u> Receipt Temp <u>14.2</u> °C On Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
				SEE ATTACHED												Comments:	Custody Seal Y <input checked="" type="checkbox"/> Bottles/ Coolers B C Intact Y N Signature Match Y N		
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date	Collection Time	MATRIX	Radium 226	Natural uranium	Thorium 230	Lead 210										
1 B102 e5			See attached		S	X	X	X	X										
2 B102 e15			Spreadsheet			X	X	X	X										
3 B105 e5						X	X	X	X										
4 B105 e15						X	X	X	X										
5 B112 e5						X	X	X	X										
6 B112 e15						X	X	X	X										
7 B126 e5						X	X	X	X										
8 B126 e15						X	X	X	X										
9 B131 e5						X	X	X	X										
10 B131 e5						X	X	X	X										
Custody Record MUST be Signed			Relinquished by (print): <u>Dave Odde</u>		Date/Time: <u>4/6/11 1100</u>	Signature: <u>Dave Odde</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>4/6/11 1100</u>	Signature: <u>John McCarthy</u>		Received by Laboratory: <u>CPHAC</u>		Date/Time: <u>4/7/11 16:40</u>	Signature: <u>John McCarthy</u>			
			Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 16:40</u>	Signature: <u>John McCarthy</u>		Received by (print):		Date/Time:	Signature:		Received by Laboratory:		Date/Time:	Signature:			
Sample Disposal:			Return to Client:			Lab Disposal:													

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.  
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000121

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LD

Study Area	Point	X	Y	Depth	Date Collected
B	1	-105.7263584	43.05855953	15	4/4/2011
B	3	-105.7245006	43.05722055	15	
B	5	-105.7245324	43.05992187	15	
B	6	-105.7227064	43.06128417	15	
B	8	-105.7226747	43.05858285	15	
B	10	-105.722643	43.05588154	15	
B	12	-105.7207537	43.05184117	15	
B	14	-105.7207854	43.05454249	15	
B	16	-105.720817	43.05724381	15	
B	18	-105.7208486	43.05994513	15	
B	20	-105.7208803	43.06264645	15	
B	21	-105.7190541	43.06400869	15	
B	23	-105.7190225	43.06130738	15	
B	25	-105.718991	43.05860606	15	
B	27	-105.7189594	43.05590474	15	
B	29	-105.7189278	43.05320342	15	
B	31	-105.7188963	43.0505021	15	
B	32	-105.7170389	43.04916299	15	4/5/2011
B	34	-105.7170704	43.05186431	15	
B	36	-105.7171019	43.05456564	15	
B	38	-105.7171334	43.05726696	15	
B	40	-105.7171648	43.05996828	15	
B	42	-105.7171963	43.06266959	15	
B	44	-105.7172278	43.06537091	15	
B	45	-105.7154015	43.0667331	15	4/6/2011
B	47	-105.7153701	43.06403178	15	
B	49	-105.7153386	43.06133046	15	4/5/2011
B	51	-105.7153072	43.05862914	15	
B	53	-105.7152758	43.05592782	15	
B	55	-105.7152445	43.0532265	15	
B	57	-105.7152131	43.05052518	15	
B	60	-105.7133558	43.04918601	15	
B	62	-105.7133871	43.05188734	15	
B	64	-105.7134184	43.05458866	15	
B	66	-105.7134497	43.05728998	15	
B	68	-105.713481	43.0599913	15	
B	70	-105.7135124	43.06269262	15	4/6/2011
B	72	-105.7135437	43.06539394	15	
B	74	-105.7117173	43.06675607	15	
B	76	-105.711686	43.06405475	15	
B	78	-105.7116548	43.06135343	15	4/5/2011
B	80	-105.7116235	43.05865211	15	
B	82	-105.7115923	43.05595079	15	
B	84	-105.7115611	43.05324946	15	
B	86	-105.7115298	43.05054814	15	
B	88	-105.7114986	43.04784681	15	

B	90	-105.7096415	43.04650758	15	4/5/2011
B	92	-105.7096726	43.04920891	15	
B	94	-105.7097038	43.05191024	15	
B	96	-105.7097349	43.05461156	15	
B	98	-105.7097661	43.05731289	15	
B	100	-105.7097972	43.06001421	15	
B	102	-105.7098284	43.06271553	15	4/6/2011
B	104	-105.7098596	43.06541686	15	
B	105	-105.708002	43.06407761	15	
B	107	-105.7079709	43.06137628	15	4/5/2011
B	109	-105.7079398	43.05867496	15	
B	110	-105.7079087	43.05597364	15	
B	112	-105.7078777	43.05327231	15	
B	114	-105.7078466	43.05057098	15	
B	116	-105.7078155	43.04786965	15	
B	118	-105.7059585	43.04653036	15	
B	120	-105.7059895	43.04923169	15	
B	122	-105.7060205	43.05193302	15	
B	124	-105.7060514	43.05463435	15	
B	126	-105.7061134	43.060037	15	
B	128	-105.7061444	43.06273833	15	4/6/2011
B	129	-105.7042252	43.05599636	15	4/5/2011
B	131	-105.7041943	43.05329503	15	
B	133	-105.7041633	43.0505937	15	
B	135	-105.7041324	43.04789237	15	
B	137	-105.7022755	43.04655302	15	
B	139	-105.7023063	43.04925436	15	
B	141	-105.7023371	43.05195569	15	
B	143	-105.702368	43.05465702	15	4/5/2011
B	146	-105.7005108	43.05331764	15	4/4/2011
B	148	-105.7004801	43.05061631	15	
B	150	-105.7004494	43.04791498	15	
B	152	-105.6985925	43.04657557	15	
B	154	-105.6986231	43.0492769	15	
B	156	-105.6986538	43.05197823	15	
B	158	-105.6986845	43.05467957	15	
B	159	-105.6968274	43.05334013	15	
B	161	-105.6967968	43.0506388	15	
B	163	-105.6967663	43.04793746	15	
B	166	-105.69494	43.04929933	15	
B	168	-105.6949705	43.05200066	15	
B	169	-105.6931136	43.05066116	15	

## **APPENDIX D**

### **Equipment Calibration and Function Checks**



Designer and Manufacturer  
of  
Scientific and Industrial  
Instruments

# CERTIFICATE OF CALIBRATION

**LUDLUM MEASUREMENTS, INC.**

POST OFFICE BOX 810 PH. 325-235-5494  
501 OAK STREET FAX NO. 325-235-4672  
SWEETWATER, TEXAS 79556, U.S.A.

CUSTOMER ERG ORDER NO. 20170907/360446

Ludlum Measurements, Inc. Model 19 Serial No. 101662

Model \_\_\_\_\_ Serial No. \_\_\_\_\_

Cal. Date 2-Mar-11 Cal Due Date 2-Mar-12 Cal. Interval 1 Year Meterface 202-016

Check mark ☒ applies to applicable instr. and/or detector IAW mfg. spec. T. 74 °F RH 20 % Alt 705.8 mm Hg

New Instrument ☐ Instrument Received ☐ Within Toler. +10% ☐ 10-20% ☐ Out of Tol. ☒ Requiring Repair ☐ Other-See comments

☒ Mechanical ck. ☒ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity

☒ F/S Resp. ck. ☒ Reset ck. ☐ Window Operation ☐ Geotropism

☐ Audio ck. ☐ Alarm Setting ck. ☒ Batt. ck. (Min. Volt) 2.2 VDC

Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☒ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set 550 V Input Sens. 33 mV Det. Oper. \_\_\_\_\_ V at \_\_\_\_\_ mV Threshold Dial Ratio \_\_\_\_\_ = \_\_\_\_\_ mV

☒ HV Readout (2 points) Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V

## COMMENTS:

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
5000	4000 uR/hr	NA	4000
5000	1000 uR/hr		1000
500	400 uR/hr = <u>73.500 cpm</u>		400
500	100 uR/hr		100
250	200 uR/hr = <u>3.5700 cpm</u>		200
250	100 uR/hr		100
50	<u>7350</u> cpm		40
50	<u>1837</u> cpm		10
25	<u>3570</u> cpm		20
25	<u>892</u> cpm		5

\*Uncertainty within ± 10% C.F. within ± 20%

50, 25 Range(s) Calibrated Electronically

REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques. Calibration system conforms to the requirements of ANSI/NCCL Z540-1-1994 and ANSI N323-1978 State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: ☐ 73410 ☐ 1131 ☐ 781 ☐ 059 ☐ 280 ☐ 60646 ☐ 70897

☐ 37 Gamma S/N ☐ 1162 ☐ G112 ☒ M565 ☐ 5105 ☐ T1008 ☐ T879 ☐ E552 ☐ E551 ☐ 720 ☐ 734 ☐ 1616 ☐ Neutron Am-241 Be S/N T-304

Alpha S/N \_\_\_\_\_ Beta S/N \_\_\_\_\_ Other \_\_\_\_\_

☒ m 500 S/N 189509 ☐ Oscilloscope S/N \_\_\_\_\_ ☒ Multimeter S/N 71300492

Calibrated By: Wendell Williams Date: 2-MAR-11

Reviewed By: Rhonda Harris Date: 2 Mar 11

This certificate shall not be reproduced except in full, without the written approval of Ludlum Measurements, Inc.

AC Inst. ☐ Passed Dielectric (Hi-Pot) and Continuity tes:  
Only ☐ Failed:

000001



Designer and Manufacturer  
of  
Scientific and Industrial  
Instruments

# CERTIFICATE OF CALIBRATION

**LUDLUM MEASUREMENTS, INC.**  
POST OFFICE BOX 810 PH. 325-235-5494  
501 OAK STREET FAX NO. 325-235-4672  
SWEETWATER, TEXAS 79556, U.S.A.

CUSTOMER ERG ORDER NO. 20170907/360446

g. Ludlum Measurements, Inc. Model 19 Serial No. 144766

g. \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

st. Date 2-Mar-11 Cal Due Date 2-Mar-12 Cal. Interval 1 Year Meterface 202-016

ck mark ☒ applies to applicable instr. and/or detector IAW mfg. spec. T. 74 °F RH 20 % Alt 705.8 mm Hg

New Instrument ☐ Instrument Received ☐ Within Toler. +10% ☐ 10-20% ☐ Out of Tol. ☒ Requiring Repair ☐ Other-See comments

Mechanical ck. ☒ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity

F/S Resp. ck. ☒ Reset ck. ☐ Window Operation ☐ Geotropism

Audio ck. ☐ Alarm Setting ck. ☒ Batt. ck. (Min. Volt) 2.2 VDC

Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☒ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

ument Volt Set 650 V Input Sens. 34 mV Det. Oper. \_\_\_\_\_ V at \_\_\_\_\_ mV Threshold \_\_\_\_\_ mV

Dial Ratio \_\_\_\_\_ = \_\_\_\_\_

☒ HV Readout (2 points) Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V Ref./Inst. \_\_\_\_\_ / \_\_\_\_\_ V

## COMMENTS:

na Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
5000	4000 uR/hr	<u>NA</u>	<u>7000</u>
5000	1000 uR/hr		<u>1000</u>
500	400 uR/hr = <u>75200 cpm</u>		<u>400</u>
500	100 uR/hr		<u>100</u>
250	200 uR/hr = <u>37200 cpm</u>		<u>200</u>
250	100 uR/hr		<u>100</u>
50	<u>7520</u> cpm		<u>40</u>
50	<u>1940</u> cpm		<u>10</u>
25	<u>3720</u> cpm		<u>20</u>
25	<u>930</u> cpm		<u>5</u>

\*Uncertainty within ± 10% C.F. within ± 20%

50, 25 Range(s) Calibrated Electronically

REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*	Log Scale	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.

State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: ☐ 73410 ☐ 1131 ☐ 781 ☐ 059 ☐ 280 ☐ 60646 ☐ 70897

☐ 37 Gamma S/N ☐ 1162 ☐ G112 ☒ M565 ☐ 5105 ☐ T1008 ☐ T879 ☐ E552 ☐ E551 ☐ 720 ☐ 734 ☐ 1616 ☐ Neutron Am-241 Be S/N T-304

Alpha S/N \_\_\_\_\_ Beta S/N \_\_\_\_\_ Other \_\_\_\_\_

☒ m 500 S/N 189509 ☐ Oscilloscope S/N \_\_\_\_\_ ☒ Multimeter S/N 71300492

Calibrated By: Wendell Wilton Date 2-MAR-11

Reviewed By: Rhonda Ham Date 2 Mar 11

This certificate shall not be reproduced except in full, without the written approval of Ludlum Measurements, Inc.

FORM 227-03/11/2010

Page 1 of 1

AC Inst. Only ☐ Passed Dielectric (Hi-Pot) and Continuity Test ☐ Failed: \_\_\_\_\_

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[illegible]

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**APPENDIX E**  
**Chains of Custody**



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT - Provide as much information as possible.

Company Name: <u>Western Environmental</u>			Project Name, PWS, Permit, Etc. <u>11-4025 (Mine Unit K North)</u>			Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>							
Report Mail Address: <u>913 Foster Rd., Casper, WY</u>			Contact Name: <u>Dane Ode</u>		Phone/Fax: <u>234-5511</u>		Email: <u>dode@testair.com</u>		Sampler: (Please Print) <u>D. Ode</u>						
Invoice Address: <u>Cameco Resources</u>			Invoice Contact & Phone: <u>John McCarthy</u>			Purchase Order:		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 <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC				ANALYSIS REQUESTED  Number of Containers: _____ Sample Type: <input type="checkbox"/> A W <input type="checkbox"/> S <input type="checkbox"/> B <input type="checkbox"/> O <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Soils/Solids <input type="checkbox"/> Vegetation <input type="checkbox"/> Bioassay <input type="checkbox"/> Other  <u>Radium-226</u> <u>Natural Uranium</u> <u>Thorium-230</u> <u>Lead-210</u>				SEE ATTACHED  Normal Turnaround (TAT)		R U S H		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by: <u>i. gde</u>	
												Comments:		Receipt Temp <u>14/12</u> °C On ice? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date	Collection Time	MATRIX	LABORATORY USE ONLY									
1 <u>See attached spreadsheet</u>					<u>S</u>										
2															
3 <u>A7e5</u>					<u>X</u>										
4 <u>A7e15</u>					<u>X</u>										
5 <u>A31e5</u>					<u>X</u>										
6 <u>A31e15</u>					<u>X</u>										
7 <u>A47e5</u>					<u>X</u>										
8 <u>A47e15</u>					<u>X</u>										
9 <u>A51e5</u>					<u>X</u>										
10 <u>A51e15</u>					<u>X</u>										
Custody Record MUST be Signed		Relinquished by (print): <u>Dane Ode</u>		Date/Time: <u>4/7/11 1306</u>		Signature: <u>[Signature]</u>		Received by (print): <u>Arlene Salinas</u>		Date/Time: <u>4/7/11 1305</u>		Signature: <u>[Signature]</u>			
		Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1640</u>		Signature: <u>[Signature]</u>		Received by (print): <u>[Signature]</u>		Date/Time: <u>4/7/11 1640</u>		Signature: <u>[Signature]</u>			
		Sample Disposal:		Return to Client:		Lab Disposal:									

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.

Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

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# Chain of Custody and Analytical Request Record

Page 2 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>		Project Name, PWS, Permit, Etc. <u>11-4025 (Mine Unit K-North)</u>		Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>															
Report Mail Address: <u>913 Foster Rd, Casper WY</u>		Contact Name: <u>Dane Ode</u>		Phone/Fax: <u>2345511</u>		Email: <u>doddec@testair.com</u>		Sampler: (Please Print) <u>D. Ode</u>													
Invoice Address: <u>Caneco Resources</u>		Invoice Contact & Phone: <u>John McCarthy</u>				Purchase Order:		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 <input type="checkbox"/> 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										R U S H  Normal Turnaround (TAT)		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by: <u>HAUC</u>			
				Receipt Temp <u>11/1</u> °C																	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date		Collection Time		MATRIX		Radium-226		Natural Uranium		Thorium-230		Lead-210		SEE ATTACHED		Comments:		On Ice: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
																				Custody Seal Y <input checked="" type="checkbox"/> N	
1 <u>A5305</u>		<u>See attached</u>		<u>S</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>X</u>								Bottles/ Coolers B <input type="checkbox"/> C	
																				Intact Y <input type="checkbox"/> N	
2 <u>A53015</u>		<u>Spreadsheet</u>		<u>↓</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>X</u>								Signature Match Y <input type="checkbox"/> N	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
Custody Record MUST be Signed		Relinquished by (print): <u>Dane Ode</u>		Date/Time: <u>4/7/11 1306</u>		Signature: <u>Dane Ode</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1305</u>		Signature: <u>John McCarthy</u>		LABORATORY USE ONLY  <u>C1104025</u>							
		Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1640</u>		Signature: <u>John McCarthy</u>		Received by (print): <u>Arlene Faurce</u>		Date/Time: <u>4/7/11 1640</u>		Signature: <u>Arlene Faurce</u>									
		Sample Disposal: Return to Client:		Lab Disposal:		Received by Laboratory: <u>C. J. P. H.</u>		Date/Time: <u>4/7/11 1640</u>		Signature:											

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.

Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

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Sample ID  
↓ \* ↓

Study Area	Point ID	X	Y	Depth	Date Collected
A	2	-105.6799282	43.07947808	5	4/7/11
A	5	-105.6781006	43.08083968	5	
A	7	-105.6780709	43.07813835	5	
A	8	-105.6780113	43.07273568	5	4/6/11
A	10	-105.6779815	43.07003435	5	
A	12	-105.6761245	43.06869458	5	
A	14	-105.6761541	43.07139591	5	
A	16	-105.6761838	43.07409725	5	
A	18	-105.6762135	43.07679859	5	4/7/11
A	20	-105.6762432	43.07949992	5	
A	22	-105.676273	43.08220125	5	
A	25	-105.6744452	43.08356279	5	
A	27	-105.6744156	43.08086146	5	
A	29	-105.6743859	43.07816013	5	
A	31	-105.6743563	43.07545879	5	
A	33	-105.6743267	43.07275745	5	4/6/11
A	35	-105.6742971	43.07005612	5	
A	37	-105.6724401	43.06871629	5	
A	39	-105.6724696	43.07141763	5	
A	41	-105.6724992	43.07411896	5	
A	43	-105.6725287	43.0768203	5	4/7/11
A	45	-105.6725582	43.07952164	5	
A	47	-105.6725878	43.08222297	5	
A	49	-105.6726173	43.0849243	5	4/6/11
A	51	-105.6707599	43.08358445	5	4/7/11
A	53	-105.6707305	43.08088312	5	
A	55	-105.670701	43.07818178	5	
A	57	-105.6706716	43.07548045	5	
A	59	-105.6706421	43.07277911	5	4/6/11
A	61	-105.6706126	43.07007777	5	
A	64	-105.6687851	43.07143922	5	
A	66	-105.6688145	43.07414056	5	
A	68	-105.6688439	43.0768419	5	
A	70	-105.6688732	43.07954324	5	
A	72	-105.6689026	43.08224457	5	
A	74	-105.668932	43.08494591	5	
A	77	-105.6670747	43.083606	5	
A	79	-105.6670454	43.08090466	5	
A	81	-105.6670161	43.07820332	5	
A	83	-105.6669868	43.07550198	5	
A	85	-105.6669575	43.07280064	5	
A	87	-105.6665159	43.07686338	5	
A	89	-105.6651882	43.07956472	5	
A	91	-105.6652175	43.08226606	5	
A	94	-105.6633603	43.08092608	5	

Study Area	Point ID	X	Y	Depth	Date Collected
A	2	-105.6799282	43.07947808	15	4/7/11
A	5	-105.6781006	43.08083968	15	
A	7	-105.6780709	43.07813835	15	✓
A	8	-105.6780113	43.07273568	15	4/6/11
A	10	-105.6779815	43.07003435	15	
A	12	-105.6761245	43.06869458	15	
A	14	-105.6761541	43.07139591	15	
A	16	-105.6761838	43.07409725	15	✓
A	18	-105.6762135	43.07679859	15	4/7/11
A	20	-105.6762432	43.07949992	15	
A	22	-105.676273	43.08220125	15	
A	25	-105.6744452	43.08356279	15	
A	27	-105.6744156	43.08086146	15	
A	29	-105.6743859	43.07816013	15	
A	31	-105.6743563	43.07545879	15	✓
A	33	-105.6743267	43.07275745	15	4/6/11
A	35	-105.6742971	43.07005612	15	
A	37	-105.6724401	43.06871629	15	
A	39	-105.6724696	43.07141763	15	
A	41	-105.6724992	43.07411896	15	✓
A	43	-105.6725287	43.0768203	15	4/7/11
A	45	-105.6725582	43.07952164	15	
A	47	-105.6725878	43.08222297	15	✓
A	49	-105.6726173	43.0849243	15	4/6/11
A	51	-105.6707599	43.08358445	15	4/7/11
A	53	-105.6707305	43.08088312	15	
A	55	-105.670701	43.07818178	15	
A	57	-105.6706716	43.07548045	15	✓
A	59	-105.6706421	43.07277911	15	4/6/11
A	61	-105.6706126	43.07007777	15	
A	64	-105.6687851	43.07143922	15	
A	66	-105.6688145	43.07414056	15	
A	68	-105.6688439	43.0768419	15	
A	70	-105.6688732	43.07954324	15	
A	72	-105.6689026	43.08224457	15	
A	74	-105.668932	43.08494591	15	
A	77	-105.6670747	43.083606	15	
A	79	-105.6670454	43.08090466	15	
A	81	-105.6670161	43.07820332	15	
A	83	-105.6669868	43.07550198	15	
A	85	-105.6669575	43.07280064	15	
A	87	-105.665159	43.07686338	15	
A	89	-105.6651882	43.07956472	15	
A	91	-105.6652175	43.08226606	15	
A	94	-105.6633603	43.08092608	15	✓



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Western Environmental</u>			Project Name, PWS, Permit, Etc. <u>11-4025 (MINE UNIT 7-8)</u>			Sample Origin State: <u>WY</u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>											
Report Mail Address: <u>913 Foster Rd, Casper WY</u>			Contact Name: <u>Dane Odde / John McCarthy</u>			Phone/Fax: <u></u>		Email: <u>dodde@testair.com</u>											
Invoice Address: <u>P.O. Box 1210, Glenrock WY 82637</u>			Invoice Contact & Phone: <u>Cameco Resources (307) 358-6541</u>			Purchase Order: <u></u>		Quote/Bottle Order: <u></u>											
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"/> POTWWWT <input type="checkbox"/> 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										Normal Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by: <u>Flick</u>	
				SEE ATTACHED												Comments:		Cooler ID(s): <u>Client</u>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)			Collection Date	Collection Time	MATRIX											Receipt Temp <u>10/12</u> °C		On ice: Yes <input type="checkbox"/> No <input type="checkbox"/>	
1 <u>See attached Spreadsheet</u>					S	X												Custody Seal Y <input checked="" type="checkbox"/>	
2																		Bottles/ Coolers B C	
3 <u>B8 @ 5</u>						X	X	X	X									Intact Y N	
4 <u>B8 @ 15</u>						X	X	X	X									Signature Match Y N	
5 <u>B21 @ 5</u>						X	X	X	X										
6 <u>B21 @ 15</u>						X	X	X	X										
7 <u>B44 @ 5</u>						X	X	X	X										
8 <u>B44 @ 15</u>						X	X	X	X										
9 <u>B68 @ 5</u>						X	X	X	X										
10 <u>B68 @ 15</u>						X	X	X	X										
Custody Record MUST be Signed			Relinquished by (print): <u>Dane Odde</u>		Date/Time: <u>4/6/11 100</u>	Signature: <u>John McCarthy</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>4/6/11 1100</u>	Signature: <u>John McCarthy</u>								
			Relinquished by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1040</u>	Signature: <u>John McCarthy</u>		Received by (print): <u>John McCarthy</u>		Date/Time: <u>4/7/11 1040</u>	Signature: <u>John McCarthy</u>								
			Sample Disposal: Return to Client		Lab Disposal:		Received by Laboratory: <u>John McCarthy</u>		Date/Time: <u>4/7/11 1040</u>	Signature: <u>John McCarthy</u>									

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. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

E000005

**PLEASE PRINT- Provide as much information as possible.**

<b>Company Name:</b> Western Environmental			<b>Project Name, PWS, Permit, Etc.</b> 11-4025 (Mine Unit 7-8)			<b>Sample Origin</b> State:		<b>EPA/State Agency:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>												
<b>Report Mail Address:</b> 913 Foster Rd., Casper, WY			<b>Contact Name:</b> Dane Odde		<b>Phone/Fax:</b> 234-5511		<b>Email:</b> d.odde@westernenv.com		<b>Sampler: (Please Print)</b> D. Odde											
<b>Invoice Address:</b> PO Box 1210, Glenrock WY			<b>Invoice Contact &amp; Phone:</b> John McCarthy, Camacho Res. (307) 358-6574				<b>Purchase Order:</b>		<b>Quote/Bottle Order:</b>											
<b>Special Report/Formats - ELI must be notified prior to sample submittal for the following:</b>  <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> GSA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP <b>Format:</b> _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC			<b>ANALYSIS REQUESTED</b>  Number of Containers: _____ Sample Type: AWS/VB/O Air Water Soils/Solids Vegetation Bioassay Other				<b>RUSH</b>  Normal Turnaround (TAT)		<b>SEE ATTACHED</b>  Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page  Comments:		<b>Shipped by:</b> HAWAII									
											<b>Cooler ID(s):</b> 014912		<b>Receipt Temp:</b> 14°C							
									<b>On Ice:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		<b>Custody Seal</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> <b>Bottles/Coolers</b> B C <b>Intact</b> Y N <b>Signature Match</b> Y N									
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX	Radon 226	Natural Uranium	Thorium 230	Lead 210												
1 B102 e5		See attached		S	X	X	X	X												
2 B102 e15		Spreadsheet			X	X	X	X												
3 B105 e5					X	X	X	X												
4 B105 e15					X	X	X	X												
5 B112 e5					X	X	X	X												
6 B112 e15					X	X	X	X												
7 B126 e5					X	X	X	X												
8 B126 e15					X	X	X	X												
9 B131 e5					X	X	X	X												
10 B131 e5					X	X	X	X												

LABORATORY USE ONLY

<b>Custody Record MUST be Signed</b>	Relinquished by (print): Dane Odde		Date/Time: 4/6/11 1100	Received by (print): John McCarthy	Date/Time: 4/6/11 1100
	Relinquished by (signature): [Signature]			Received by (signature): [Signature]	
	Returned to Client: [Signature]			Received by Laboratory: [Signature]	
	Lab Disposal: [Signature]			Date/Time: 4/7/11 11:41	

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. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

**FEEDBACK**

Study Area	Point	X	Y	Depth	Date Collected
B	1	-105.7263584	43.05855953	5	4/4/2011
B	3	-105.7245006	43.05722055	5	
B	5	-105.7245324	43.05992187	5	
B	6	-105.7227064	43.06128417	5	
B	8	-105.7226747	43.05858285	5	
B	10	-105.722643	43.05588154	5	
B	12	-105.7207537	43.05184117	5	
B	14	-105.7207854	43.05454249	5	
B	16	-105.720817	43.05724381	5	
B	18	-105.7208486	43.05994513	5	
B	20	-105.7208803	43.06264645	5	
B	21	-105.7190541	43.06400869	5	
B	23	-105.7190225	43.06130738	5	
B	25	-105.718991	43.05860606	5	
B	27	-105.7189594	43.05590474	5	
B	29	-105.7189278	43.05320342	5	
B	31	-105.7188963	43.0505021	5	
B	32	-105.7170389	43.04916299	5	4/5/2011
B	34	-105.7170704	43.05186431	5	
B	36	-105.7171019	43.05456564	5	
B	38	-105.7171334	43.05726696	5	
B	40	-105.7171648	43.05996828	5	
B	42	-105.7171963	43.06266959	5	
B	44	-105.7172278	43.06537091	5	
B	45	-105.7154015	43.0667331	5	4/6/2011
B	47	-105.7153701	43.06403178	5	
B	49	-105.7153386	43.06133046	5	4/5/2011
B	51	-105.7153072	43.05862914	5	
B	53	-105.7152758	43.05592782	5	
B	55	-105.7152445	43.0532265	5	
B	57	-105.7152131	43.05052518	5	
B	60	-105.7133558	43.04918601	5	
B	62	-105.7133871	43.05188734	5	
B	64	-105.7134184	43.05458866	5	
B	66	-105.7134497	43.05728998	5	
B	68	-105.713481	43.0599913	5	
B	70	-105.7135124	43.06269262	5	4/6/2011
B	72	-105.7135437	43.06539394	5	
B	74	-105.7117173	43.06675607	5	
B	76	-105.711686	43.06405475	5	
B	78	-105.7116548	43.06135343	5	4/5/2011
B	80	-105.7116235	43.05865211	5	
B	82	-105.7115923	43.05595079	5	
B	84	-105.7115611	43.05324946	5	
B	86	-105.7115298	43.05054814	5	
B	88	-105.7114986	43.04784681	5	

B	90	-105.7096415	43.04650758	5	4/5/2011
B	92	-105.7096726	43.04920891	5	
B	94	-105.7097038	43.05191024	5	
B	96	-105.7097349	43.05461156	5	
B	98	-105.7097661	43.05731289	5	
B	100	-105.7097972	43.06001421	5	
B	102	-105.7098284	43.06271553	5	4/6/2011
B	104	-105.7098596	43.06541686	5	
B	105	-105.708002	43.06407761	5	
B	107	-105.7079709	43.06137628	5	4/5/2011
B	109	-105.7079398	43.05867496	5	
B	110	-105.7079087	43.05597364	5	
B	112	-105.7078777	43.05327231	5	
B	114	-105.7078466	43.05057098	5	
B	116	-105.7078155	43.04786965	5	
B	118	-105.7059585	43.04653036	5	
B	120	-105.7059895	43.04923169	5	
B	122	-105.7060205	43.05193302	5	
B	124	-105.7060514	43.05463435	5	
B	126	-105.7061134	43.060037	5	
B	128	-105.7061444	43.06273833	5	4/6/2011
B	129	-105.7042252	43.05599636	5	4/5/2011
B	131	-105.7041943	43.05329503	5	
B	133	-105.7041633	43.0505937	5	
B	135	-105.7041324	43.04789237	5	
B	137	-105.7022755	43.04655302	5	
B	139	-105.7023063	43.04925436	5	
B	141	-105.7023371	43.05195569	5	
B	143	-105.702368	43.05465702	5	4/5/2011
B	146	-105.7005108	43.05331764	5	4/4/2011
B	148	-105.7004801	43.05061631	5	
B	150	-105.7004494	43.04791498	5	
B	152	-105.6985925	43.04657557	5	
B	154	-105.6986231	43.0492769	5	
B	156	-105.6986538	43.05197823	5	
B	158	-105.6986845	43.05467957	5	
B	159	-105.6968274	43.05334013	5	
B	161	-105.6967968	43.0506388	5	
B	163	-105.6967663	43.04793746	5	
B	166	-105.69494	43.04929933	5	
B	168	-105.6949705	43.05200066	5	
B	169	-105.6931136	43.05066116	5	

1D

Study Area	Point	X	Y	Depth	Date Collected
B	1	-105.7263584	43.05855953	15	4/4/2011
B	3	-105.7245006	43.05722055	15	
B	5	-105.7245324	43.05992187	15	
B	6	-105.7227064	43.06128417	15	
B	8	-105.7226747	43.05858285	15	
B	10	-105.722643	43.05588154	15	
B	12	-105.7207537	43.05184117	15	
B	14	-105.7207854	43.05454249	15	
B	16	-105.720817	43.05724381	15	
B	18	-105.7208486	43.05994513	15	
B	20	-105.7208803	43.06264645	15	
B	21	-105.7190541	43.06400869	15	
B	23	-105.7190225	43.06130738	15	
B	25	-105.718991	43.05860606	15	
B	27	-105.7189594	43.05590474	15	
B	29	-105.7189278	43.05320342	15	
B	31	-105.7188963	43.0505021	15	
B	32	-105.7170389	43.04916299	15	4/5/2011
B	34	-105.7170704	43.05186431	15	
B	36	-105.7171019	43.05456564	15	
B	38	-105.7171334	43.05726696	15	
B	40	-105.7171648	43.05996828	15	
B	42	-105.7171963	43.06266959	15	
B	44	-105.7172278	43.06537091	15	
B	45	-105.7154015	43.0667331	15	4/6/2011
B	47	-105.7153701	43.06403178	15	
B	49	-105.7153386	43.06133046	15	4/5/2011
B	51	-105.7153072	43.05862914	15	
B	53	-105.7152758	43.05592782	15	
B	55	-105.7152445	43.0532265	15	
B	57	-105.7152131	43.05052518	15	
B	60	-105.7133558	43.04918601	15	
B	62	-105.7133871	43.05188734	15	
B	64	-105.7134184	43.05458866	15	
B	66	-105.7134497	43.05728998	15	
B	68	-105.713481	43.0599913	15	
B	70	-105.7135124	43.06269262	15	4/6/2011
B	72	-105.7135437	43.06539394	15	
B	74	-105.7117173	43.06675607	15	
B	76	-105.711686	43.06405475	15	
B	78	-105.7116548	43.06135343	15	4/5/2011
B	80	-105.7116235	43.05865211	15	
B	82	-105.7115923	43.05595079	15	
B	84	-105.7115611	43.05324946	15	
B	86	-105.7115298	43.05054814	15	
B	88	-105.7114986	43.04784681	15	

B	90	-105.7096415	43.04650758	15	4/5/2011
B	92	-105.7096726	43.04920891	15	
B	94	-105.7097038	43.05191024	15	
B	96	-105.7097349	43.05461156	15	
B	98	-105.7097661	43.05731289	15	
B	100	-105.7097972	43.06001421	15	
B	102	-105.7098284	43.06271553	15	4/6/2011
B	104	-105.7098596	43.06541686	15	
B	105	-105.708002	43.06407761	15	
B	107	-105.7079709	43.06137628	15	4/5/2011
B	109	-105.7079398	43.05867496	15	
B	110	-105.7079087	43.05597364	15	
B	112	-105.7078777	43.05327231	15	
B	114	-105.7078466	43.05057098	15	
B	116	-105.7078155	43.04786965	15	
B	118	-105.7059585	43.04653036	15	
B	120	-105.7059895	43.04923169	15	
B	122	-105.7060205	43.05193302	15	
B	124	-105.7060514	43.05463435	15	
B	126	-105.7061134	43.060037	15	
B	128	-105.7061444	43.06273833	15	4/6/2011
B	129	-105.7042252	43.05599636	15	4/5/2011
B	131	-105.7041943	43.05329503	15	
B	133	-105.7041633	43.0505937	15	
B	135	-105.7041324	43.04789237	15	
B	137	-105.7022755	43.04655302	15	
B	139	-105.7023063	43.04925436	15	
B	141	-105.7023371	43.05195569	15	
B	143	-105.702368	43.05465702	15	4/5/2011
B	146	-105.7005108	43.05331764	15	4/4/2011
B	148	-105.7004801	43.05061631	15	
B	150	-105.7004494	43.04791498	15	
B	152	-105.6985925	43.04657557	15	
B	154	-105.6986231	43.0492769	15	
B	156	-105.6986538	43.05197823	15	
B	158	-105.6986845	43.05467957	15	
B	159	-105.6968274	43.05334013	15	
B	161	-105.6967968	43.0506388	15	
B	163	-105.6967663	43.04793746	15	
B	166	-105.69494	43.04929933	15	
B	168	-105.6949705	43.05200066	15	
B	169	-105.6931136	43.05066116	15	

**APPENDIX F**  
**Resumes of Project Personnel**



# PROFESSIONAL PROFILE

## DANE M. ODDE

### Environmental Project Supervisor

#### Technical Expertise:

- Analytical Laboratory Manager
- LDAR Program Manager
- Indoor Air Quality Monitoring
- Mold Inspection and Sampling
- Environmental Site Inspections
- Source Emission Testing
- Soil Sampling
- VOC Sampling
- Respirator Fit Test Administrator

#### Technical Experience:

Mr. Odde has over 4 years of experience in environmental testing. He has assisted in numerous source emissions testing throughout the Mountain West. Mr. Odde has experience in sample train preparation for EPA methods. He has managed numerous environmental site inspections, mold and indoor air quality projects, as well as LDAR monitoring across the Western United States. Mr. Odde is the Laboratory Manager for Western Environmental's Laboratory.

#### Education:

Mr. Odde has a Bachelors of Science degree in Biology from the University of Wyoming.

#### Certification:

MSHA Training  
H<sub>2</sub>S Safety Training  
EPA Certified Visible Emissions Evaluator  
CPR  
First Aid  
ASTM International Member  
Completed ASTM TPT on Environmental Site Assessments course



# PROFESSIONAL PROFILE

## **Benjamin Root** **Environmental Specialist**

### **Technical Expertise:**

- Source Emission Testing
- Field Sampling
- Calibration and Maintenance of Sampling Equipment
- Monitoring and Equipment Repair

### **Technical Experience:**

Mr. Root has over 1 year experience in environmental testing. He has assisted in numerous source emission surveys throughout the United States. Mr. Root has experience in sample train preparation for various EPA methods. He has academic experience in laboratory and fieldwork.

### **Education:**

Bachelor of Science, Chemical Engineering, University of Wyoming.

### **Certification:**

H<sub>2</sub>S Safety Training  
MSHA Safety Training Course



# PROFESSIONAL PROFILE

## **James Burchett** **Environmental Specialist**

### **Technical Expertise:**

- Monitoring and Equipment Repair
- Field Sampling
- Calibration and Maintenance of Sampling Equipment
- Source Emission Testing

### **Technical Experience:**

Mr. Burchett has over 2 years experience in environmental testing. He has assisted in numerous source emission surveys throughout the United States. Mr. Burchett has experience in sample train preparation for various EPA methods. He has academic experience in laboratory and fieldwork.

### **Education:**

Mr. Burchett received his High School Diploma in Wakefield, Kansas.

### **Certification:**

H<sub>2</sub>S Safety Training  
MSHA Safety Training Course  
First Aid  
CPR



# PROFESSIONAL PROFILE

## TYLER CORDELL

### Environmental Specialist

#### Technical Expertise:

- Source Emission Testing
- Field Sampling
- Monitoring and Equipment Repair
- Calibration and Maintenance of Sampling Equipment

#### Technical Experience:

Mr. Cordell has over 2 years experience in environmental testing. He has assisted in numerous source emission surveys throughout the United States. Mr. Cordell has experience in sample train preparation for various EPA methods. He has academic experience in laboratory and fieldwork.

#### Education:

Mr. Cordell has 2 years of college education thru Casper College in the Accounting program.

#### Certification:

H<sub>2</sub>S Safety Training  
MSHA Safety Training Course  
CPR Certified  
First Aid