**Lab Job No.:** <u>160-4690-1</u>

Laboratory: <u>Test America-St. Louis</u>
Site: <u>Canadian Radium & Uranium (2222)</u>

No. of Samples/Matrix: 9/soil; 1/aqueous

Analysis: Metals and Mercury

Contractor: Weston Solutions, Inc., Region 2 SAT

The following table summarizes the analytical methods used for the requested analyses and the EPA Region 2 data validation standard operating procedures (SOPs) used for data validation.

Analysis	Analytical Method	Data Validation SOP No.
Metals	SW-846 Method 6010C	No. HW-2a (Revision 15), December 2012
Mercury	SW-846 Method 7470A	No. HW-2c (Revision 15), December 2012

The following definitions provide brief explanations of the national qualifiers assigned to results during the data review process.

- U: The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
- J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+: The result is an estimated quantity, but the result may be biased high.
- J-: The result is an estimated quantity, but the result may be biased low.
- R: The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
- UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewer's				
Signature:	Juls	Date:	1/29/14_	
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On November 20 and 21, 2012, EPA Region 2 SAT personnel collected nine soil samples, including one field duplicate, and one rinse blank for metal and mercury analyses from the Canadian Radium & Uranium (2222) site, 105 Kisco Avenue, The Village of Mount Kisco, New York. These samples were shipped under Chain of Custody for the requested analysis to Test America-St. Louis, 13715 Rider Trail North, Earth City, MO. The laboratory verified that samples were received intact, properly sealed, and refrigerated. Sample cooler temperature was recorded at 2.7°C.

Field Sample ID	Lab Sample ID	Matrix	Analysis	Sampling Date
2222-S01	160-4690-1	Soil	Metals, Mercury	11/20/2013
2222-S02	160-4690-2	Soil	Metals, Mercury	11/21/2013
2222-S03	160-4690-3	Soil	Metals, Mercury	11/21/2013
2222-S04	160-4690-4	Soil	Metals, Mercury	11/21/2013
2222-S05	160-4690-5	Soil	Metals, Mercury	11/21/2013
2222-S06	160-4690-6	Soil	Metals, Mercury	11/21/2013
2222-S07	160-4690-7	Soil	Metals, Mercury	11/21/2013
2222-S08	160-4690-8	Soil	Metals, Mercury	11/21/2013
2222-S09*	160-4690-9	Soil	Metals, Mercury	11/21/2013
2222-RB01	160-4690-10	Aqueous	Metals, Mercury	11/20/2013

A field duplicate of 2222-S04

The following quality control (QC) parameters were evaluated. However, only data qualifications warranted by a specific QC non-conformance are summarized in this Data Assessment Report.

- Sample Receipt Conditions
- Preservation and Holding Times
- Calibration
- Initial and Continuing Calibration Verification
- Initial and Continuing Calibration Blanks
- Preparation Blanks
- Inductively Coupled Plasma (ICP) Interference Check
- Contract Required Quantitation Limit Check
- Linear Range Check
- Matrix Spike (MS) Recovery
- Laboratory Duplicate Analysis
- Laboratory Control Sample (LCS)
- ICP Serial Dilution
- Field Duplicate
- Field/Rinse Blank

### Metals

### Continuing Calibration Verification (CCV)

The recoveries of potassium, sodium, and thallium in CCV 160-91064/59 of analysis on 12/10/2013 exceeded the control limit of 110%. If present, the positive results of potassium, sodium, and thallium in samples 2222-S05, 2222-S06, 2222-S07, 2222-S08, and 2222-S09 were estimated for potential high bias (J+).

### Matrix Spike/Matrix Spike Duplicate

Sample 2222-S04 was used for matrix spike (MS) and matrix spike duplicate (MSD). The recoveries of aluminum, calcium, iron, lead, manganese, and potassium were outside the control limits of 75% to 125%; however, since their concentrations in sample 2222-S04 were greater than four times the spiked concentrations, no action was required.

The following recoveries were <30% in MS and/or MSD analyses: barium and manganese. The positive results of barium and manganese were estimated (J-) in sample 2222-S04 for potential low bias.

The antimony recovery was <75% but >30% in MS analysis; the non-detected antimony results was estimated (UJ) in sample 2222-S04.

The sodium recovery was >125% in MS analysis. Since sodium was not detected in sample 2222-S04, no action was required.

Instead of a sample duplicate analysis, the lab analyzed a matrix spike duplicate. The relative percent difference (RPD) between the MS and MSD concentrations was greater than 30% for aluminum, calcium, and lead; these positive results were qualified as estimated (J) in sample 2222-S04.

### **ICP Serial Dilution**

The concentrations of the following analytes varied more than 10% between sample 2222-S04 and its five-fold dilution: aluminum, barium, and lead. Since the positive results of these analytes have already been estimated for other non-compliant QC analyses, no further action was required.

### Field Duplicate

For field duplicate pair 2222-S04/2222-S09, the RPDs of the following analytes were >50%, thus estimating (J) their results in both samples: barium, iron, and lead.

For field duplicate pair 2222-S04/2222-S09, the absolute differences between two concentrations of the following analytes were greater than two times the reporting limit for 2222-04, thus estimating (J/UJ) their results in both samples: chromium, cobalt, nickel, and zinc.

## Rinse Blank

Trace concentrations of calcium, iron, and zinc were detected in rinsate blank 2222-RB01. These analyte concentrations in all soil samples were greater than 10 times the rinsate blank concentration; no action was required.

### **Mercury**

Sample 2222-S04 was used for MS and MSD analyses. Mercury recoveries were 30% and 11% in MS and MSD, respectively. The positive mercury result in sample 2222-S04 was estimated for potential low bias (J-). The RPD between the MS and MSD concentrations was >30%; since the mercury result has already been estimated, no further action was required.

The mercury concentration in 2222-S04 was less than five times its reporting limit; however, in its field duplicate 2222-S09, the mercury concentration was greater than five times its reporting limit. The absolute difference between these two concentrations was greater than two times the reporting limit for 2222-04; the mercury results were estimated (J) for both samples

#### **CASE NARRATIVE**

Client: Weston Solutions, Inc.

**Project: Canadian Radium and Uranium** 

Report Number: 160-4690-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

The following clean-up methods for Organic analyses may have been used on the samples in this data set. Specific methods employed are documented on the batch extraction logs:

Method 3600C: Cleanup

Method 3620C: Florisil Cleanup

Method 3630C: Silica Gel Cleanup

Method 3640A: Gel-Permeation Cleanup

Method 3650B: Acid-Base Partition Cleanup

Method 3660B: Sulfur Cleanup

Method 3665A: Sulfuric Acid/Permanganate Cleanup

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIPT

The samples were received on 11/26/2013 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

#### **TOTAL METALS (ICP)**

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 12/02/2013 and analyzed on 12/10/2013 and 12/11/2013.

#### Analytical Batch 91064

The following sample(s) was diluted due to high concentrations of target and interfering analytes: (160-4690-4 SD), 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S04 (160-4690-4 MSD), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8), 2222-S09

(160-4690-9). Elevated reporting limits (RLs) are provided.

The serial dilution performed for aluminum, barium, calcium, and lead was outside control limits indicating potential matrix interference: (160-4690-4 SD).

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Due to the high concentration of aluminum, calcium, lead, iron, potassium, and magnesium, the matrix spike/matrix spike duplicate (MS/MSD) could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria: 2222-S04 (160-4690-4 MS), 2222-S04 (160-4690-4 MSD).

The matrix spike and/or matrix spike duplicate (MS/MSD) recoveries for barium, sodium, antimony, and manganese were outside control limits. The MS\MSD RPD are within acceptable QC criteria indicating a potential matrix interference. The associated laboratory control sample (LCS) recovery met acceptance criteria: 2222-S04 (160-4690-4 MSD), 2222-S04 (160-4690-4 MSD).

The continuing calibration verification (CCV) for potassium, sodium, and thallium recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported: (CCV 160-91064/59).

The native sample, matrix spike, and matrix spike duplicate (MS/MSD) were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of calcium in the MSD was above the instrument calibration range. The data have been reported and qualified: 2222-S04 (160-4690-4 MSD).

#### **Analytical Batch 91445**

The following sample(s) was diluted due to high concentrations of target and interfering analytes: 2222-S05 (160-4690-5), 2222-S09 (160-4690-9). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

#### **TOTAL METALS (ICP)**

Sample 2222-RB01 (160-4690-10) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 01/02/2014 and analyzed on 01/03/2014.

#### **Analytical Batch 95677**

The matrix spike duplicate (MSD) recoveries for sodium were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No other difficulties were encountered during the metals analysis.

All other quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Sample 2222-RB01 (160-4690-10) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/03/2013.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

#### MERCURY

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 12/03/2013.

#### **Analytical Batch 89215**

The matrix spike / matrix spike duplicate (MS/MSD) recovery and precision was outside control limits, indicating matrix interference. The sample was a non-homogeneous mixture of soil; samples contained rocks and damp dirt. The LCS was within acceptable limits: 2222-S04 (160-4690-4 MSD), 2222-S04 (160-4690-4 MSD).

The following sample was diluted to bring the concentration of target analytes within the calibration range: 2222-S01 (160-4690-1). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

## PERCENT SOLIDS

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 12/04/2013.

No difficulties were encountered during the % solids analysis.

All quality control parameters were within the acceptance limits.

#### **RADIUM 226 (21 DAY INGROWTH)**

Sample 2222-RB01 (160-4690-10) was analyzed for Radium 226 (21 day ingrowth) in accordance with SW- 846 Method 9315. The samples were prepared on 11/27/2013 and analyzed on 12/24/2013.

No other difficulties were encountered during the Radium 226 analysis.

All other quality control parameters were within the acceptance limits.

#### RADIUM-228 (GFPC)

Sample 2222-RB01 (160-4690-10) was analyzed for Radium-228 (GFPC) in accordance with SW-846 Method 9320. The samples were prepared on 11/27/2013 and analyzed on 12/18/2013.

No other difficulties were encountered during the Radium 228 analysis.

All other quality control parameters were within the acceptance limits.

#### ISOTOPIC THORIUM (ALPHA SPECTROMETRY)

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE A01R\_Th. The samples were leached on 12/02/2013, prepared on 01/14/2014 and 12/24/2013 and analyzed on 01/04/2014, 01/07/2014, 01/17/2014 and 01/18/2014.

The matrix spike duplicate (MSD) recovery associated with the following samples was outside the control limits of 76-115% (124%) for Thorium 230: 2222-S04 (160-4690-4 MSD). Sample matrix interference was noted during the initial preparation. Method performance is demonstrated by acceptable matrix spike (MS) and laboratory control sample (LCS) recoveries, further indicating the presence of matrix interference.

Samples 2222-S09 (160-4690-9) contained rocks and were non-homogeneous. The sample contains rocks and is not homogeneous: 2222-S04 (160-4690-4), 2222-S04 (160-4690-4 MSD). Samples contain rocks and are not homogeneous: 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3). This could lead to possible matrix interference.

No other difficulties were encountered during the Isotopic Thorium analysis.

All other quality control parameters were within the acceptance limits.

#### **ISOTOPIC THORIUM (ALPHA SPECTROMETRY)**

Sample 2222-RB01 (160-4690-10) was analyzed for Isotopic Thorium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 01/04/2014 and analyzed on 01/09/2014.

No other difficulties were encountered during the Isotopic Thorium analysis.

All other quality control parameters were within the acceptance limits.

### ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 12/02/2013, prepared on 12/24/2013 and 12/26/2013 and analyzed on 01/04/2014 and 01/09/2014.

Samples contain rocks and are not homogeneous. This could lead to possible matrix interference: 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3).

No difficulties were encountered during the Isotopic Uranium analysis.

All quality control parameters were within the acceptance limits.

### ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Sample 2222-RB01 (160-4690-10) was analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 01/04/2014 and analyzed on 01/13/2014.

Insufficient sample volume was provided to perform a sample duplicate. A LCS/LCSD was used instead of a sample duplicate:

#### 2222-RB01 (160-4690-10)

No difficulties were encountered during the Isotopic Uranium analysis.

All quality control parameters were within the acceptance limits.

### RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8) and 2222-S09 (160-4690-9) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA\_01\_R. The samples were leached on 12/02/2013, prepared on 12/12/2013 and analyzed on 01/03/2014.

For gamma spectroscopy batch 91444, insufficient sample was provided for the following samples to fill a tuna can geometry calibrated for Ra-226 analysis by gamma spectroscopy: (160-4690-4 DU), 2222-S01 (160-4690-1), 2222-S02 (160-4690-2), 2222-S03 (160-4690-3), 2222-S04 (160-4690-4), 2222-S05 (160-4690-5), 2222-S06 (160-4690-6), 2222-S07 (160-4690-7), 2222-S08 (160-4690-8), 2222-S09 (160-4690-9). Therefore, the samples were placed into a 100 mL geometry. The use of a different geometry could potentially bias the results low due to the loss of radon into the headspace of the container.

No other difficulties were encountered during the Radium 226 analysis.

All other quality control parameters were within the acceptance limits.

## 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S01 Lab Sample ID: 160-4690-1

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/20/2013 10:15

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 87.2

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	8600	100	72	mg/Kg	1		5	6010C
7440-36-0	Antimony	3.3	5.1	3.3	mg/Kg	U		5	6010C
7440-38-2	Arsenic	2.4	5.1	1.6	mg/Kg	J		5	6010C
7440-39-3	Barium	190	26	1.3	mg/Kg			5	6010C
7440-41-7	Beryllium	0.87	2.6	0.87	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.51	2.6	0.51	mg/Kg	U		5	6010C
7440-70-2	Calcium	4000	1300	68	mg/Kg			5	6010C
7440-47-3	Chromium	28	5.1	1.6	mg/Kg			5	6010C
7440-48-4	Cobalt	9.1	26	4.8	mg/Kg	J		5	6010C
7440-50-8	Copper	29	13	3.7	mg/Kg			5	6010C
7439-89-6	Iron	14000	51	15	mg/Kg			5	6010C
7439-92-1	Lead	170	5.1	0.88	mg/Kg			5	6010C
7439-95-4	Magnesium	3400	510	43	mg/Kg			5	6010C
7439-96-5	Manganese	210	5.1	0.79	mg/Kg	1		5	6010C
7440-02-0	Nickel	19	21	1.2	mg/Kg	J		5	6010C
7440-09-7	Potassium	1700	2600	1700	mg/Kg	. Ω		5	6010C
7782-49-2	Selenium	1.5	7.7	1.5	mg/Kg	Ū		5	6010C
7440-22-4	Silver	1.2	5.1	1.2	mg/Kg	Ū		5	6010C
7440-23-5	Sodium	240	510	240	mg/Kg	Ü		5	6010C
7440-28-0	Thallium	7.8	10	7.8	mg/Kg	Ū		5	6010C
7440-62-2	Vanadium	26	26	6.5	mg/Kg	†		5	6010C
7440-66-6	Zinc	180	26	10	mg/Kg			5	6010C
7439-97-6	Mercury	5.1	0.33	0.11	mq/Kq	<del>                                     </del>		10	7471B

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## 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S02 Lab Sample ID: 160-4690-2

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 16:10

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 90.4

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	7600	96	68	mg/Kg			5	6010C
7440-36-0	Antimony	3.1	4.8	3.1	mg/Kg	Ū		5	6010C
7440-38-2	Arsenic	3.6	4.8	1.5	mg/Kg	J		5	6010C
7440-39-3	Barium	190	24	1.2	mg/Kg			5	6010C
7440-41-7	Beryllium	0.81	2.4	0.81	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.48	2.4	0.48	mg/Kg	J	407	5	6010C
7440-70-2	Calcium	14000	1200	64	mg/Kg			5	6010C
7440-47-3	Chromium	25	4.8	1.5	mg/Kg			5	6010C
7440-48-4	Cobalt	11	24	4.5	mg/Kg	J		5	6010C
7440-50-8	Copper	170	12	3.5	mg/Kg	<u> </u>		5	6010C
7439-89-6	Iron	14000	48	14	mg/Kg			5	6010C
7439-92-1	Lead	230	4.8	0.83	mg/Kg			5	6010C
7439-95-4	Magnesium	8200	480	40	mg/Kg	1		5	6010C
7439-96-5	Manganese	140	4.8	0.74	mg/Kg		*	5	6010C
7440-02-0	Nickel	31	19	1.1	mg/Kg			5	6010C
7440-09-7	Potassium	2600	2400	1600	mg/Kg			5	6010C
7782-49-2	Selenium	1.4	7.2	1.4	mg/Kg	U		5	6010C
7440-22-4	Silver	1.1	4.8	1.1	mg/Kg	Ü		5	6010C
7440-23-5	Sodium	300	480	230	mg/Kg	J		5	6010C
7440-28-0	Thallium	7.3	9.6	7.3	mg/Kg	Ü		5	6010C
7440-62-2	Vanadium	29	24	6.1	mg/Kg	<b>†</b>		5	6010C
7440-66-6	Zinc	150	24	9.5	mg/Kg			5	6010C
7439-97-6	Mercury	0.090	0.035	0.012	mg/Kg		<u> </u>	1	7471B

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## 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S03 Lab Sample ID: 160-4690-3

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 16:30

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 90.6

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	3900	98	69	mg/Kg	Ì		5	6010C
7440-36-0	Antimony	3.1	4.9	3.1	mg/Kg	U		5	6010C
7440-38-2	Arsenic	1.6	4.9	1.6	mg/Kg	J		5	6010C
7440-39-3	Barium	85	25	1.2	mg/Kg			5	6010C
7440-41-7	Beryllium	0.83	2.5	0.83	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.49	2.5	0.49	mg/Kg	Ü		5	6010C
7440-70-2	Calcium	7000	1200	65	mg/Kg			5	6010C
7440-47-3	Chromium	13	4.9	1.5	mg/Kg	1		5	6010C
7440-48-4	Cobalt	6.4	25	4.6	mg/Kg	J		5	6010C
7440-50-8	Copper	25	12	3.6	mg/Kg	<del> </del>		5	6010C
7439-89-6	Iron	8200	49	15	mg/Kg	<del>                                     </del>		5	6010C
7439-92-1	Lead	110	4.9	0.85	mg/Kg	<del>                                     </del>	-	5	6010C
7439-95-4	Magnesium	3800	490	41	mg/Kg			5	6010C
7439-96-5	Manganese	73	4.9	0.76	mg/Kg	1	70-	5	6010C
7440-02-0	Nickel	14	20	1.1	mg/Kg	J		5	6010C
7440-09-7	Potassium	1700	2500	1700	mg/Kg	Ū		5	6010C
7782-49-2	Selenium	1.4	7.4	1.4	mg/Kg	Ū		5	6010C
7440-22-4	Silver	1.1	4.9	1.1	mg/Kg	Ū		5	6010C
7440-23-5	Sodium	230	490	230	mg/Kg	U		5	6010C
7440-28-0	Thallium	7.4	9.8	7.4	mg/Kg	Ü		5	6010C
7440-62-2	Vanadium	14	25	6.2	mg/Kg	J		5	6010C
7440-66-6	Zinc	74	25	9.7	mg/Kg			5	6010C
7439-97-6	Mercury	0.22	0.031	0.010	mg/Kg	<b>+</b>		1	7471B



## 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S04 Lab Sample ID: 160-4690-4

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 15:25

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 87.1

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	9800	110	75	mg/Kg	1	7	5	6010C
7440-36-0	Antimony	3.4	5.3	3.4	mg/Kg	Ū		5	6010C
7440-38-2	Arsenic	5.0	5.3	1.7	mg/Kg	J		5	6010C
7440-39-3	Barium	180	27	1.3	mg/Kg		T-	5	6010C
7440-41-7	Beryllium	0.90	2.7	0.90	mg/Kg	Ū		5	6010C
7440-43-9	Cadmium	0.53	2.7	0.53	mg/Kg	Ū		5	6010C
7440-70-2	Calcium	22000	1300	71	mg/Kg	1	7	5	6010C
7440-47-3	Chromium	23	5.3	1.6	mg/Kg	1	7	5	6010C
7440-48-4	Cobalt	9.7	27	5.0	mg/Kg	J		5	6010C
7440-50-8	Copper	31	13	3.9	mg/Kg	1		5	6010C
7439-89-6	Iron	20000	53	16	mg/Kg	1	J	5	6010C
7439-92-1	Lead	1000	5.3	0.92	mg/Kg		3	5	6010C
7439-95-4	Magnesium	8400	530	44	mg/Kg			5	6010C
7439-96-5	Manganese	380	5.3	0.82	mg/Kg	†	J-	5	6010C
7440-02-0	Nickel	15	21	1.2	mg/Kg	J		5	6010C
7440-09-7	Potassium	4700	2700	1800	mg/Kg	†	<del>                                     </del>	5	6010C
7782-49-2	Selenium	1.5	8.0	1.5	mg/Kg	U		5	6010C
7440-22-4	Silver	1.2	5.3	1.2	mg/Kg	Ū		5	6010C
7440-23-5	Sodium	250	530	250	mg/Kg	U		5	6010C
7440-28-0	Thallium	8.0	11	8.0	mg/Kg	U		5	6010C
7440-62-2	Vanadium	37	27	6.7	mg/Kg	1		5	6010C
7440-66-6	Zinc	140	27	11	mg/Kg	<del>                                     </del>	1	5	6010C
7439-97-6	Mercury	0.15	0.037	0.012	mg/Kg	+	7-	1	7471B

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# 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S05 Lab Sample ID: 160-4690-5

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 14:20

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 95.0

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	11000	94	66	mg/Kg	Ì		5	6010C
7440-36-0	Antimony	3.0	4.7	3.0	mg/Kg	U		5	6010C
7440-38-2	Arsenic	2.5	4.7	1.5	mg/Kg	J		5	6010C
7440-39-3	Barium	130	24	1.2	mg/Kg		J-	5	6010C
7440-41-7	Beryllium	0.80	2.4	0.80	mg/Kg	Ū		5	6010C
7440-43-9	Cadmium	0.47	2.4	0.47	mg/Kg	Ü		5	6010C
7440-70-2	Calcium	3300	1200	63	mg/Kg			5	6010C
7440-47-3	Chromium	42	4.7	1.4	mg/Kg	<del> </del>	<u> </u>	5	6010C
7440-48-4	Cobalt	10	24	4.4	mg/Kg	J		5	6010C
7440-50-8	Copper	28	12	3.4	mg/Kg			5	6010C
7439-89-6	Iron	17000	47	14	mg/Kg	<u> </u>		5	6010C
7439-92-1	Lead	110	4.7	0.81	mg/Kg		†	5	6010C
7439-95-4	Magnesium	5100	470	39	mg/Kg			5	6010C
7439-96-5	Manganese	310	4.7	0.73	mg/Kg		1-	5	6010C
7440-02-0	Nickel	26	19	1, 1	mg/Kg			5	6010C
7440-09-7	Potassium	3100	2400	1600	mg/Kg		J+	5	6010C
7782-49-2	Selenium	1.4	7.1	1.4	mg/Kg	U		5	6010C
7440-22-4	Silver	1.1	4.7	1.1	mg/Kg	U		5	6010C
7440-23-5	Sodium	220	470	220	mg/Kg	Ū	^	5	6010C
7440-28-0	Thallium	7.1	9.4	7.1	mg/Kg	Ū	^	5	6010C
7440-62-2	Vanadium	36	24	5.9	mg/Kg	T		5	6010C
7440-66-6	Zinc	97	24	9.3	mg/Kg	<b>—</b>		5	6010C
7439-97-6	Mercury	0.076	0.030	0.010	mg/Kg	-		1	7471B



# 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S06 Lab Sample ID: 160-4690-6

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 14:50

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 89.6

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	7400	110	77	mg/Kg	İ		5	6010C
7440-36-0	Antimony	3.5	5.5	3.5	mg/Kg	U		5	6010C
7440-38-2	Arsenic	4.3	5.5	1.8	mg/Kg	J		5	6010C
7440-39-3	Barium	100	28	1.4	mg/Kg		J-	5	6010C
7440-41-7	Beryllium	0.93	2.8	0.93	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.55	2.8	0.55	mg/Kg	U		5	6010C
7440-70-2	Calcium	17000	1400	74	mg/Kg			5	6010C
7440-47-3	Chromium	32	5.5	1.7	mg/Kg			5	6010C
7440-48-4	Cobalt	8.8	28	5.2	mg/Kg	J	1	5	6010C
7440-50-8	Copper	56	14	4.0	mg/Kg			5	6010C
7439-89-6	Iron	15000	55	16	mg/Kg			5	6010C
7439-92-1	Lead	160	5.5	0.95	mg/Kg			5	6010C
7439-95-4	Magnesium	5700	550	46	mg/Kg		1	5	6010C
7439-96-5	Manganese	170	5.5	0.85	mg/Kg		J-	5	6010C
7440-02-0	Nickel	20	22	1.2	mg/Kg	J		5	6010C
7440-09-7	Potassium	2500	2800	1900	mg/Kg	J	/	5	6010C
7782-49-2	Selenium	1.6	8.3	1.6	mg/Kg	U	<u> </u>	5	6010C
7440-22-4	Silver	1.3	5.5	1.3	mg/Kg	U		5	6010C
7440-23-5	Sodium	500	550	260	mg/Kg	J	1	5	6010C
7440-28-0	Thallium	8.4	11	8.4	mg/Kg	U	^	5	6010C
7440-62-2	Vanadium	32	28	7.0	mg/Kg		<del>                                     </del>	5	6010C
7440-66-6	Zinc	150	28	11	mg/Kg	-		5	6010C
7439-97-6	Mercury	0.089	0.036	0.012	mg/Kg	+	<del>                                     </del>	1	7471B



# 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S07 Lab Sample ID: 160-4690-7

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 16:35

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 79.2

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	12000	110	75	mg/Kg	Ī		5	6010C
7440-36-0	Antimony	3.4	5.4	3.4	mg/Kg	U		5	6010C
7440-38-2	Arsenic	2.9	5.4	1.7	mg/Kg	J		5	6010C
7440-39-3	Barium	93	27	1.3	mg/Kg		7-	5	6010C
7440-41-7	Beryllium	0.91	2.7	0.91	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.54	2.7	0.54	mg/Kg	U	1	5	6010C
7440-70-2	Calcium	2300	1300	72	mg/Kg			5	6010C
7440-47-3	Chromium	32	5.4	1.7	mg/Kg			5	6010C
7440-48-4	Cobalt	12	27	5.1	mg/Kg	J		5	6010C
7440-50-8	Copper	24	13	3.9	mg/Kg			5	6010C
7439-89-6	Iron	16000	54	16	mg/Kg	1		5	6010C
7439-92-1	Lead	90	5.4	0.93	mg/Kg			5	6010C
7439-95-4	Magnesium	4100	540	45	mg/Kg			5	6010C
7439-96-5	Manganese	250	5.4	0.83	mg/Kg		7-	5	6010C
7440-02-0	Nickel	21	22	1.2	mg/Kg	J	···	5	6010C
7440-09-7	Potassium	1800	2700	1800	mg/Kg	U	7	5	6010C
7782-49-2	Selenium	1.6	8.1	1.6	mg/Kg	U		5	6010C
7440-22-4	Silver	1.3	5.4	1.3	mg/Kg	Ü		5	6010C
7440-23-5	Sodium	320	540	250	mg/Kg	J	2	5	6010C
7440-28-0	Thallium	8.1	11	8.1	mg/Kg	Ü	~	5	6010C
7440-62-2	Vanadium	30	27	6.8	mg/Kg		1	5	6010C
7440-66-6	Zinc	100	27	11	mg/Kg	†		5	6010C
7439-97-6	Mercury	0.064	0.039	0.013	mg/Kg	†		1	7471B



# 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S08 Lab Sample ID: 160-4690-8

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 16:37

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 95.3

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	8700	100	72	mg/Kg			5	6010C
7440-36-0	Antimony	3.3	5.2	3.3	mg/Kg	U		5	6010C
7440-38-2	Arsenic	1.6	5.2	1.6	mg/Kg	U		5	6010C
7440-39-3	Barium	86	26	1.3	mg/Kg		1-	5	6010C
7440-41-7	Beryllium	0.87	2.6	0.87	mg/Kg	U		5	6010C
7440-43-9	Cadmium	0.52	2.6	0.52	mg/Kg	Ū	T	5	6010C
7440-70-2	Calcium	1900	1300	69	mg/Kg	<del>                                     </del>	+	5	6010C
7440-47-3	Chromium	31	5.2	1.6	mg/Kg	<del>                                     </del>	<del> </del>	5	6010C
7440-48-4	Cobalt	10	26	4.8	mg/Kg	J		5	6010C
7440-50-8	Copper	23	13	3.8	mg/Kg			5	6010C
7439-89-6	Iron	14000	52	15	mg/Kg	1		5	6010C
7439-92-1	Lead	44	5.2	0.89	mg/Kg	1		5	6010C
7439-95-4	Magnesium	4100	520	43	mg/Kg	<del> </del>		5	6010C
7439-96-5	Manganese	210	5.2	0.80	mg/Kg	<del>                                     </del>	J-	5	6010C
7440-02-0	Nickel	21	21	1.2	mg/Kg	<del> </del>		5	6010C
7440-09-7	Potassium	2100	2600	1700	mg/Kg	J	^	5	6010C
7782-49-2	Selenium	1.5	7.7	1.5	mg/Kg	Ū		5	6010C
7440-22-4	Silver	1.2	5.2	1.2	mg/Kg	ט	+	5	6010C
7440-23-5	Sodium	240	520	240	mg/Kg	Ü	^	5	6010C
7440-28-0	Thallium	7.8	10	7.8	mg/Kg	Ū	5	5	6010C
7440-62-2	Vanadium	26	26	6.5	mg/Kg			5	6010C
7440-66-6	Zinc	76	26	10	mg/Kg	1	<del>                                     </del>	5	6010C
7439-97-6	Mercury	0.031	0.032	0.011	mg/Kg	J		1	7471B



# 1A-IN INORGANIC ANALYSIS DATA SHEET METALS

Client Sample ID: 2222-S09 Lab Sample ID: 160-4690-9

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

SDG ID.: 2222

Matrix: Solid Date Sampled: 11/21/2013 15:27

Reporting Basis: DRY Date Received: 11/26/2013 10:00

% Solids: 87.7

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	7200	200	140	mg/Kg	Ť T		10	6010C
7440-36-0	Antimony	6.3	9.8	6.3	mg/Kg	U		10	6010C
7440-38-2	Arsenic	7.7	9.8	3.1	mg/Kg	J		10	6010C
7440-39-3	Barium	1900	49	2.5	mg/Kg	7	J	10	6010C
7440-41-7	Beryllium	1.7	4.9	1.7	mg/Kg	U		10	6010C
7440-43-9	Cadmium	2.0	4.9	0.98	mg/Kg	J		10	6010C
7440-70-2	Calcium	110000	12000	650	mg/Kg		J	50	6010C
7440-47-3	Chromium	92	9.8	3.0	mg/Kg			10	6010C
7440-48-4	Cobalt	77	49	9.2	mg/Kg		+	10	6010C
7440-50-8	Copper	44	25	7.1	mg/Kg			10	6010C
7439-89-6	Iron	35000	98	29	mg/Kg		J	10	6010C
7439-92-1	Lead	440	9.8	1.7	mg/Kg		1	10	6010C
7439-95-4	Magnesium	8700	980	82	mg/Kg			10	6010C
7439-96-5	Manganese	440	9.8	1.5	mg/Kg			10	6010C
7440-02-0	Nickel	120	39	2.2	mg/Kg		T	10	6010C
7440-09-7	Potassium	3300	4900	3300	mg/Kg	U	1	10	6010C
7782-49-2	Selenium	2.8	15	2.8	mg/Kg	U	1	10	6010C
7440-22-4	Silver	2.3	9.8	2.3	mg/Kg	U		10	6010C
7440-23-5	Sodium	460	980	460	mg/Kg	U	1	10	6010C
7440-28-0	Thallium	15	20	15	mg/Kg	U	1	10	6010C
7440-62-2	Vanadium	33	49	12	mg/Kg	J	†	10	6010C
7440-66-6	Zinc	800	49	19	mg/Kg		J	10	6010C
7439-97-6	Mercury	0.23	0.034	0.011	mg/Kg		-	1	7471B



## 1A-IN INORGANIC ANALYSIS DATA SHEET METALS



Client Sample ID: 2222-RB01 Lab Sample ID: 160-4690-10

Lab Name: TestAmerica St. Louis Job No.: 160-4690-1

Matrix: Water Date Sampled: 11/20/2013 14:45

Reporting Basis: WET Date Received: 11/26/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	С	Q	DIL	Method
7429-90-5	Aluminum	80	200	80	ug/L	U		1	6010C
7440-36-0	Antimony	4.0	10	4.0	ug/L	U		1	6010C
7440-38-2	Arsenic	2.0	10	2.0	ug/L	U		1	6010C
7440-39-3	Barium	4.0	50	4.0	ug/L	Ū		1	6010C
7440-41-7	Beryllium	0.61	5.0	0.61	ug/L	Ū		1	6010C
7440-43-9	Cadmium	0.91	5.0	0.91	ug/L	Ū		1	6010C
7440-70-2	Calcium	500	1000	110	ug/L	J		1	6010C
7440-47-3	Chromium	3.1	10	3.1	ug/L	U		1	6010C
7440-48-4	Cobalt	4.9	50	4.9	ug/L	Ū		1	6010C
7440-50-8	Copper	4.6	25	4.6	ug/L	Ū		1	6010C
7439-89-6	Iron	55	100	28	ug/L	J		1	6010C
7439-92-1	Lead	1.5	10	1.5	ug/L	U		1	6010C
7439-95-4	Magnesium	130	1000	130	ug/L	U		1	6010C
7439-96-5	Manganese	3.3	15	3.3	ug/L	U		1	6010C
7440-02-0	Nickel	13	40	13	ug/L	Ū		1	6010C
7440-09-7	Potassium	1700	5000	1700	ug/L	Ü		1	6010C
7782-49-2	Selenium	2.7	15	2.7	ug/L	U		1	6010C
7440-22-4	Silver	6.0	10	6.0	ug/L	U		1	6010C
7440-23-5	Sodium	320	1000	320	ug/L	Ü		1	6010C
7440-28-0	Thallium	4.0	20	4.0	ug/L	U		1	6010C
7440-62-2	Vanadium	4.1	50	4.1	ug/L	Ü		1	6010C
7440-66-6	Zinc	8.0	20	5.2	ug/L	J		1	6010C
7439-97-6	Mercury	0.060	0.20	0.060	ug/L	U		1	7470A

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SDG ID.: 2222

Table 1.
Canadian Radium Uranium Corp.
Complete Soil Sample Results
November 2013

Location ID	1	SO	1		SO	2		S03					
Weston Smaple ID		2222-	-S01	222-S02				2222-S03					
Date	11/20/2013				11/21/2013				11/21/2013				
Comments													
Depth	2-3 feet					0-1 fo	oot		0-1 foot				
	Result	Qualifier	Report Limit	Unit	Result	Qualifier	Report Limi	t Unit	Result	Qualifier	Report Lim	nit Unit	
Aluminum	8600	V	100	mg/kg	7600	V	96	mg/kg	3900	V	98	mg/kg	
Antimony	3.3	U	5.1	mg/kg	3.1	U	4.8	mg/kg	3.1	U	4.9	mg/kg	
Arsenic	2.4	J	5.1	mg/kg	3.6	J	4.8	mg/kg	1.6	J	4.9	mg/kg	
Barium	190	V	26	mg/kg	190	V	24	mg/kg	85	V	25	mg/kg	
Beryllium	0.87	U	2.6	mg/kg	0.81	U	2.4	mg/kg	0.83	U	2.5	mg/kg	
Cadmium	0.51	U	2.6	mg/kg	0.48	J	2.4	mg/kg	0.49	U	2.5	mg/kg	
Calcium	4000	V	1300	mg/kg	14000	V	1200	mg/kg	7000	V	1200	mg/kg	
Chromium	28	V	5.1	mg/kg	25	V	4.8	mg/kg	13	V	4.9	mg/kg	
Cobalt	9.1	J	26	mg/kg	11	J	24	mg/kg	6.4	J	25	mg/kg	
Copper	29	V	13	mg/kg	170	V	12	mg/kg	25	V	12	mg/kg	
Iron	14000	V	51	mg/kg	14000	V	48	mg/kg	8200	V	49	mg/kg	
Lead	170	V	5.1	mg/kg	230	V	4.8	mg/kg	110	V	4.9	mg/kg	
Magnesium	3400	V	510	mg/kg	8200	V	480	mg/kg	3800	V	490	mg/kg	
Manganese	210	V	5.1	mg/kg	140	V	4.8	mg/kg	73	V	4.9	mg/kg	
Nickel	19	J	21	mg/kg	31	V	19	mg/kg	14	J	20	mg/kg	
Potassium	1700	U	2600	mg/kg	2600	V	2400	mg/kg	1700	U	2500	mg/kg	
Selenium	1.5	U	7.7	mg/kg	1.4	U	7.2	mg/kg	1.4	U	7.4	mg/kg	
Silver	1.2	U	5.1	mg/kg	1.1	U	4.8	mg/kg	1.1	U	4.9	mg/kg	
Sodium	240	U	510	mg/kg	300	J	480	mg/kg	230	U	490	mg/kg	
Thallium	7.8	U	10	mg/kg	7.3	U	9.6	mg/kg	7.4	U	9.8	mg/kg	
Vanadium	26	V	26	mg/kg	29	V	24	mg/kg	14	J	25	mg/kg	
Zinc	180	V	26	mg/kg	150	V	24	mg/kg	74	V	25	mg/kg	
Mercury	5.1	V	0.33	mg/kg	0.090	V	0.035	mg/kg	0.22	V	0.031	mg/kg	
Thorium-229	85.5	V		%	96.8	V		%	93.2	V		%	
Thorium-228	0.626	V	0.0555	pCi/g	1.07	V	0.0446	pCi/g	0.884	V	0.0460	pCi/g	
Thorium-230	0.999	V	0.0146	pCi/g	64.6	V	0.0132	pCi/g	58.1	V	0.0333	pCi/g	
Thorium-232	0.557	V	0.0341	pCi/g	0.842	V	0.0131	pCi/g	0.766	V	0.0276	pCi/g	
Uranium-232	79.0	V		%	91.1	V		%	101	V		%	
Uranium-233/234	0.428	V	0.0731	pCi/g	0.781	V	0.0372	pCi/g	0.769	V	0.0342	pCi/g	
Uranium-235/236	0.000	U	0.0333	pCi/g	0.0741	V	0.0462	pCi/g	0.0704	V	0.0264	pCi/g	
Uranium-238	0.380	V	0.0633	pCi/g	0.849	V	0.0371	pCi/g	0.749	V	0.0436	pCi/g	
Radium-226	22.0	V	0.327	pCi/g	135	V	0.796	pCi/g	129	V	0.657	pCi/g	
Radium-228	1.05	V	0.590	pCi/g	1.17	U	1.63	pCi/g	0.946	U	1.44	pCi/g	

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Table 1.
Canadian Radium Uranium Corp.
Complete Soil Sample Results
November 2013

Location ID	S04					S09		S05				
Weston Smaple ID	2222-S04					2222-		2222-S05				
Date	11/21/2013					11/21/2		11/21/2013				
Comments					Duplicare of							
Depth	3-4 feet					3-4 f€		0-1 foot				
	Result	Qualifier	Report Limi		Result	Qualifier	Report Limit		Result	Qualifier	Report Limi	
Aluminum	9800	J	110	mg/kg	7200	V	200	mg/kg	11000	V	94	mg/kg
Antimony	3.4	U	5.3	mg/kg	6.3	U	9.8		3.0	U	4.7	mg/kg
Arsenic	5.0	J	5.3	mg/kg	7.7	J	9.8	0 0	2.5	J	4.7	mg/kg
Barium	180	J-	27	mg/kg	1900	J	49	mg/kg	130	J-	24	mg/kg
Beryllium	0.90	U	2.7	mg/kg	1.7	U	4.9	mg/kg	0.80	U	2.4	mg/kg
Cadmium	0.53	U	2.7	mg/kg	2.0	J	4.9	mg/kg	0.47	U	2.4	mg/kg
Calcium	22000	J	1300	mg/kg	110000	J	12000	mg/kg	3300	V	1200	mg/kg
Chromium	23	J	5.3	mg/kg	92	J	9.8	mg/kg	42	V	4.7	mg/kg
Cobalt	9.7	J	27	mg/kg	77	J	49	0 0	10	J	24	mg/kg
Copper	31	V	13	mg/kg	44	V	25	0 0	28	V	12	mg/kg
Iron	20000	J	53	mg/kg	35000	J	98	mg/kg	17000	V	47	mg/kg
Lead	1000	J	5.3	mg/kg	440	J	9.8	mg/kg	110	V	4.7	mg/kg
Magnesium	8400	V	530	mg/kg	8700	V	980	0 0	5100	V	470	mg/kg
Manganese	380	J-	5.3	mg/kg	440	V	9.8	0 0	310	J-	4.7	mg/kg
Nickel	15	J	21	mg/kg	120	J	39	mg/kg	26	V	19	mg/kg
Potassium	4700	V	2700	mg/kg	3300	U	4900	mg/kg	3100	J+	2400	mg/kg
Selenium	1.5	U	8.0	mg/kg	2.8	U	15	mg/kg	1.4	U	7.1	mg/kg
Silver	1.2	U	5.3	mg/kg	2.3	U	9.8	mg/kg	1.1	U	4.7	mg/kg
Sodium	250	U	530	mg/kg	460	U	980		220	U^	470	mg/kg
Thallium	8.0	U	11	mg/kg	15	U	20	mg/kg	7.1	U^	9.4	mg/kg
Vanadium	37	V	27	mg/kg	33	J	49		36	V	24	mg/kg
Zinc	140	J	27	mg/kg	800	J	49	0 0	97	V	24	mg/kg
Mercury	0.15	J-	0.037	mg/kg	0.23	<del>1</del>	0.034	mg/kg	0.076	V	0.030	mg/kg
Thorium-229	81.2	V		%	90.2	V		%	92.9	V		%
Thorium-228	0.850	V	0.0591	pCi/g	0.808	V	0.0834	pCi/g	0.589	V	0.109	pCi/g
Thorium-230	4.63	V	0.131	pCi/g	5.82	V	0.0848	pCi/g	1.81	V	0.0919	pCi/g
Thorium-232	0.879	V	0.0974	pCi/g	0.624	V	0.0854	pCi/g	0.605	V	0.0676	pCi/g
Uranium-232	87.7	V		%	86.3	V		%	81.0	V		%
Uranium-233/234	0.383	V	0.101	pCi/g	0.356	V	0.0774	pCi/g	0.606	V	0.115	pCi/g
Uranium-235/236	0.0316	Ü	0.117	pCi/g	0.0415	Ü	0.0877	pCi/g	0.0178	Ù	0.0867	pCi/g
Uranium-238	0.327	V	0.102	pCi/g	0.516	V	0.0804	pCi/g	0.429	V	0.109	pCi/g
Radium-226	14.0	V	0.303	pCi/g	15.4	V	0.319	pCi/g	109	V	0.626	pCi/g
Radium-228	0.975	V	0.460	pCi/g	1.25	V	0.482	pCi/g	1.79	V	1.08	pCi/g

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Table 1.
Canadian Radium Uranium Corp.
Complete Soil Sample Results
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Location ID		S00			S07	7		S08					
Weston Smaple ID	2222-S06				2222-S07				2222-S08				
Date		11/21/2	2013		11/21/2	2013		11/21/2013					
Comments					Backgro	ound							
Depth		0-1 fo	oot		1-2 fe	eet		3-4 feet					
	Result	Qualifier	Report Limi	t Unit	Result	Qualifier	Report Limi	t Unit	Result	Qualifier	Report Limi	t Unit	
Aluminum	7400	V	110	mg/kg	12000	V	110	mg/kg	8700	V	100	mg/kg	
Antimony	3.5	U	5.5		3.4	U	5.4	mg/kg	3.3	U	5.2	mg/kg	
Arsenic	4.3	J	5.5	mg/kg	2.9	J	5.4	mg/kg	1.6	U	5.2	mg/kg	
Barium	100	J-	28	mg/kg	93	J-	27	mg/kg	86	J-	26	mg/kg	
Beryllium	0.93	U	2.8	mg/kg	0.91	U	2.7	mg/kg	0.87	U	2.6	mg/kg	
Cadmium	0.55	U	2.8	mg/kg	0.54	U	2.7	mg/kg	0.52	U	2.6	mg/kg	
Calcium	17000	V	1400	mg/kg	2300	V	1300	mg/kg	1900	V	1300	mg/kg	
Chromium	32	V	5.5	mg/kg	32	V	5.4	mg/kg	31	V	5.2	mg/kg	
Cobalt	8.8	J	28	mg/kg	12	J	27	mg/kg	10	J	26	mg/kg	
Copper	56	V	14	mg/kg	24	V	13	mg/kg	23	V	13	mg/kg	
Iron	15000	V	55	mg/kg	16000	V	54	mg/kg	14000	V	52	mg/kg	
Lead	160	V	5.5	mg/kg	90	V	5.4	mg/kg	44	V	5.2	mg/kg	
Magnesium	5700	V	550		4100	V	540	mg/kg	4100	V	520	mg/kg	
Manganese	170	J-	5.5	mg/kg	250	J-	5.4	mg/kg	210	J-	5.2	mg/kg	
Nickel	20	J	22	mg/kg	21	J	22	mg/kg	21	V	21	mg/kg	
Potassium	2500	J	2800	mg/kg	1800	U	2700	mg/kg	2100	J	2600	mg/kg	
Selenium	1.6	U	8.3	mg/kg	1.6	U	8.1	mg/kg	1.5	U	7.7	mg/kg	
Silver	1.3	U	5.5	mg/kg	1.3	U	5.4	mg/kg	1.2	U	5.2	mg/kg	
Sodium	500	J	550	mg/kg	320	J	540	mg/kg	240	U	520	mg/kg	
Thallium	8.4	U^	11		8.1	U	11	mg/kg	7.8	U	10	mg/kg	
Vanadium	32	V	28	mg/kg	30	V	27	mg/kg	26	V	26	mg/kg	
Zinc	150	V	28	mg/kg	100	V	27	mg/kg	76	V	26	mg/kg	
Mercury	0.089	V	0.036	mg/kg	0.064	V	0.039	mg/kg	0.031	J	0.032	mg/kg	
,				0 0				0 0				" "	
Thorium-229	83.7	V		%	86.8	V		%	78.4	V		%	
Thorium-228	0.794	V	0.110	pCi/g	0.430	V	0.0967	pCi/g	0.567	V	0.0918	pCi/g	
Thorium-230	83.3	V	0.0650	pCi/g	0.407	V	0.0879	pCi/g	0.575	V	0.0776	pCi/g	
Thorium-232	0.739	V	0.0341	pCi/g	0.508	V	0.0543	pCi/g	0.547	V	0.0679	pCi/g	
Uranium-232	96.5	V		%	84.4	V		%	81.6	V		%	
Uranium-233/234	0.702	V	0.0806	pCi/g	0.374	V	0.0766	pCi/g	0.299	V	0.0834	pCi/g	
Uranium-235/236	0.00539	Ü	0.0700	pCi/g	0.0620	Ü	0.0696	pCi/g	0.0254	Ü	0.0639	pCi/g	
Uranium-238	0.773	V	0.0603	pCi/g	0.462	V	0.0876	pCi/g	0.417	V	0.0729	pCi/g	
Radium-226	109	V	0.712	pCi/g	0.894	V	0.216	pCi/g	3.44	V	0.233	pCi/g	
Radium-228	0.710	U	1.60	pCi/g	0.843	V	0.206	pCi/g	1.35	V	0.243	pCi/g	

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