

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-16732-1

Client Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

For:

Westinghouse Electric Company LLC
3300 State Road P
Festus, Missouri 63028

Attn: Mr. Martin Swanson



Authorized for release by:
4/7/2016 12:37:30 PM

Ivan Vania, Project Manager II
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Job ID: 160-16732-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Westinghouse Electric Company LLC

Project: HDP RFP-CBA-022 (7 DAY TAT)

Report Number: 160-16732-1

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."

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

RECEIPT

The samples were received on 3/31/2016 11:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 20.0° C.

TECHNETIUM-99 (ICPMS)

Samples L08-12-19-T-R-B-00 (160-16732-1), L08-12-20-T-R-B-00 (160-16732-2), L08-12-21-T-R-B-00 (160-16732-3), L08-12-21-T-R-Q-00 (160-16732-4), L08-12-22-T-R-B-00 (160-16732-5), L08-12-23-T-R-B-00 (160-16732-6), L08-12-24-T-E-B-00 (160-16732-7), L08-12-25-T-E-B-00 (160-16732-8), L08-12-26-T-R-B-00 (160-16732-9) and L08-12-27-T-R-B-00 (160-16732-10) were analyzed for Technetium-99 (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 04/01/2016 and analyzed on 04/05/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples L08-12-19-T-R-B-00 (160-16732-1), L08-12-20-T-R-B-00 (160-16732-2), L08-12-21-T-R-B-00 (160-16732-3),

Case Narrative

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

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Laboratory: TestAmerica St. Louis (Continued)

L08-12-21-T-R-Q-00 (160-16732-4), L08-12-22-T-R-B-00 (160-16732-5), L08-12-23-T-R-B-00 (160-16732-6), L08-12-24-T-E-B-00 (160-16732-7), L08-12-25-T-E-B-00 (160-16732-8), L08-12-26-T-R-B-00 (160-16732-9) and L08-12-27-T-R-B-00 (160-16732-10) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 04/01/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CESIUM-137 & OTHER GAMMA EMITTERS (GS)

Samples L08-12-19-T-R-B-00 (160-16732-1), L08-12-20-T-R-B-00 (160-16732-2), L08-12-21-T-R-B-00 (160-16732-3), L08-12-21-T-R-Q-00 (160-16732-4), L08-12-22-T-R-B-00 (160-16732-5), L08-12-23-T-R-B-00 (160-16732-6), L08-12-24-T-E-B-00 (160-16732-7), L08-12-25-T-E-B-00 (160-16732-8), L08-12-26-T-R-B-00 (160-16732-9) and L08-12-27-T-R-B-00 (160-16732-10) were analyzed for Cesium-137 & Other Gamma Emitters (GS) in accordance with DOE GA-01-R. The samples were leached on 03/31/2016, and prepared and analyzed on 04/01/2016.

Preparation Batch 160-243328:

Radium-226 is reported in these samples at the client's request. Radium-226 is reported from the 609.31 keV line of bismuth-214. Because the samples have not had 21-days of ingrowth, the activity for radium-226 is an estimated value and may be biased low. This bias is caused by the disruption of secular equilibrium between radium-226 and bismuth-214 by the loss of radon-222 during sample preparation. The samples are reported with the MDC achieved. L08-12-19-T-R-B-00 (160-16732-1), L08-12-20-T-R-B-00 (160-16732-2), L08-12-21-T-R-B-00 (160-16732-3), L08-12-21-T-R-Q-00 (160-16732-4), L08-12-22-T-R-B-00 (160-16732-5), L08-12-23-T-R-B-00 (160-16732-6), L08-12-24-T-E-B-00 (160-16732-7), L08-12-25-T-E-B-00 (160-16732-8), L08-12-26-T-R-B-00 (160-16732-9), L08-12-27-T-R-B-00 (160-16732-10), (LCS 160-243328/2-A), (MB 160-243328/1-A) and (160-16732-A-1-E DU)

The following samples, analyzed by gamma spectroscopy, did not meet the thorium-234 detection goal; L08-12-20-T-R-B-00 (160-16732-2), L08-12-23-T-R-B-00 (160-16732-6), L08-12-24-T-E-B-00 (160-16732-7), L08-12-25-T-E-B-00 (160-16732-8) and L08-12-27-T-R-B-00 (160-16732-10). The samples final activity was above the MDC. The samples are reported with the MDC achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Hematite Decommissioning Project

Procedure HDP-PR-QA-006, Chain of Custody

Revision: 4

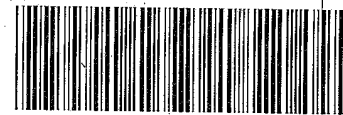
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Westinghouse Non-Proprietary Class 3

FORM HDP-PR-QA-006-1
CHAIN OF CUSTODY

Instructions: Each time the container is transferred to another organization, a person from each organization should sign the CoC. The Laboratory/End User must verify that the sample is correctly identified before the sample is released for use or analysis and send the completed CoC to HDP.

Chain of Custody ID No. F-032916-02 Page 1/1				Requested Analysis										Laboratory Name:		
Project Name:				Comp (C) or Grab (G)	Gamma Spec	Isotopic Uranium	Tl-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	TA-MO	
Contact Person:															Laboratory Address:	
Phone Number:															Phone No.	
Sampler Name															Laboratory Contact Person:	
															Phone No.	
				Turn Around Time												
				Rush (7 days)												
				Remarks												
Sample ID	Date	Time	Matrix													
L08-12-19-T-R-B-00	3/28/2016	16:00	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-20-T-R-B-00	3/28/2016	16:05	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-21-T-R-B-00	3/28/2016	16:10	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-21-T-R-Q-00	3/28/2016	16:10	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-22-T-R-B-00	3/28/2016	16:15	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-23-T-R-B-00	3/28/2016	16:20	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-24-T-E-B-00	3/28/2016	16:30	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-25-T-E-B-00	3/28/2016	16:35	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-26-T-R-B-00	3/29/2016	16:25	S	G	X		X	X						1	LSA 08-12 Bias	
L08-12-27-T-R-B-00	3/29/2016	16:30	S	G	X		X	X						1	LSA 08-12 Bias	
Relinquished by: <i>Gorsun</i>				Date/Time: 3/31/16		Received by: <i>R. G. 3815</i>				Date/Time: 3/31/16		Total: 10		Cooler Temperature: Ambient		
Company Name: <i>WEC</i>				Date/Time: 0910		Company Name: <i>CROSSROADS</i>				Date/Time: 0910		Cooler ID: 0329-01, 0330-01		Shipper and Number:		
Received by:				Date/Time:		Relinquished by:				Date/Time:		Comments: N/A				
Company Name:				Date/Time:		Company Name:				Date/Time:						
Relinquished by: <i>R. G. 3815</i>				Date/Time: 3/31/16		Received by: <i>Chapman</i>				Date/Time: 3/31/16		Verified By: <i>Gorsun</i>				
Company Name: <i>CROSSROADS</i>				Date/Time: 1110		Company Name: <i>WEC</i>				Date/Time: 1110		Date/Time: 3/31/16				



160-16732 Chain of Custody

Login Sample Receipt Checklist

Client: Westinghouse Electric Company LLC

Job Number: 160-16732-1

Login Number: 16732

List Source: TestAmerica St. Louis

List Number: 1

Creator: Dedner, Connie L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS), Tc-99	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL
6020A	Metals (ICP/MS), Tc-99 in Activity	SW846	TAL SL
GA-01-R	Cesium-137 & Other Gamma Emitters (GS)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-16732-1	L08-12-19-T-R-B-00	Solid	03/28/16 16:00	03/31/16 11:10
160-16732-2	L08-12-20-T-R-B-00	Solid	03/28/16 16:05	03/31/16 11:10
160-16732-3	L08-12-21-T-R-B-00	Solid	03/28/16 16:10	03/31/16 11:10
160-16732-4	L08-12-21-T-R-Q-00	Solid	03/28/16 16:10	03/31/16 11:10
160-16732-5	L08-12-22-T-R-B-00	Solid	03/28/16 16:15	03/31/16 11:10
160-16732-6	L08-12-23-T-R-B-00	Solid	03/28/16 16:20	03/31/16 11:10
160-16732-7	L08-12-24-T-E-B-00	Solid	03/28/16 16:30	03/31/16 11:10
160-16732-8	L08-12-25-T-E-B-00	Solid	03/28/16 16:35	03/31/16 11:10
160-16732-9	L08-12-26-T-R-B-00	Solid	03/29/16 16:25	03/31/16 11:10
160-16732-10	L08-12-27-T-R-B-00	Solid	03/29/16 16:30	03/31/16 11:10

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-19-T-R-B-00

Date Collected: 03/28/16 16:00

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-1

Matrix: Solid

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	1.25		0.137	0.187		0.112	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Americium 241	-0.0178	U	0.0642	0.0642		0.108	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Bismuth 212	0.963		0.404	0.416		0.569	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Bismuth 214	0.779		0.104	0.131		0.0748	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Lead 212	1.01		0.0861	0.157		0.0924	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Lead 214	0.889		0.0870	0.127		0.0812	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Potassium 40	17.9		1.23	2.21		0.268	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Protactinium 231	0.694	U	0.272	0.282		1.29	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Radium 226	0.779		0.104	0.131	1.00	0.0748	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Thorium 234	1.08		0.341	0.360	1.00	0.907	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Uranium 235	0.927		0.211	0.231		0.239	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Protactinium 234m	1.44	U	2.23	2.23		6.64	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Thorium 232	1.25		0.137	0.187		0.112	pCi/g	04/01/16 14:08	04/01/16 16:16	1
Other Detected Radionuclides			Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Ti-208	0.340		0.0533	0.0639		0.0410	pCi/g	04/01/16 14:08	04/01/16 16:16	1

Client Sample ID: L08-12-19-T-R-B-00

Date Collected: 03/28/16 16:00

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-1

Matrix: Solid

Percent Solids: 82.8

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00012		0.000066	0.000020	mg/Kg	☼	04/01/16 05:05	04/05/16 14:37	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	1.97		0.109	0.212	1.32	0.226	pCi/g	04/01/16 05:05	04/05/16 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	92		30 - 110					04/01/16 05:05	04/05/16 14:37	1

Client Sample ID: L08-12-20-T-R-B-00

Date Collected: 03/28/16 16:05

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-2

Matrix: Solid

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	1.12		0.117	0.162		0.0947	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Americium 241	-0.0219	U	0.198	0.198		0.148	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Bismuth 212	1.20		0.387	0.406		0.375	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Bismuth 214	0.737		0.0980	0.124		0.0750	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Lead 212	1.02		0.0762	0.152		0.0669	pCi/g	04/01/16 14:08	04/01/16 16:18	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-20-T-R-B-00

Lab Sample ID: 160-16732-2

Date Collected: 03/28/16 16:05

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Lead 214	0.801		0.0812	0.116		0.0768	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Potassium 40	22.4		1.11	2.51		0.247	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Protactinium 231	-0.684	U	0.702	0.706		1.15	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Radium 226	0.737		0.0980	0.124	1.00	0.0750	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Thorium 234	11.3		1.15	1.65	1.00	1.22	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Uranium 235	4.75		0.253	0.546		0.303	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Protactinium 234m	11.2		3.67	3.83		4.95	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Thorium 232	1.12		0.117	0.162		0.0947	pCi/g	04/01/16 14:08	04/01/16 16:18	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.311		0.0471	0.0569		0.0388	pCi/g	04/01/16 14:08	04/01/16 16:18	1

Client Sample ID: L08-12-20-T-R-B-00

Lab Sample ID: 160-16732-2

Date Collected: 03/28/16 16:05

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 83.9

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.0021		0.000061	0.000018	mg/Kg	☼	04/01/16 05:05	04/05/16 14:41	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	35.2		0.627	3.30	1.23	0.210	pCi/g	04/01/16 05:05	04/05/16 14:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	97		30 - 110					04/01/16 05:05	04/05/16 14:41	1

Client Sample ID: L08-12-21-T-R-B-00

Lab Sample ID: 160-16732-3

Date Collected: 03/28/16 16:10

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.422		0.0696	0.0819		0.0637	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Americium 241	-0.0106	U	0.0367	0.0367		0.0617	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Bismuth 212	0.590		0.162	0.173		0.102	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Bismuth 214	0.534		0.0670	0.0870		0.0467	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Lead 212	0.370		0.0404	0.0626		0.0357	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Lead 214	0.640		0.0562	0.0871		0.0314	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Potassium 40	6.90		0.589	0.920		0.214	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Protactinium 231	0.346	U	0.187	0.191		0.580	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Radium 226	0.534		0.0670	0.0870	1.00	0.0467	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Thorium 234	2.93		0.430	0.528	1.00	0.581	pCi/g	04/01/16 14:08	04/01/16 16:19	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-21-T-R-B-00

Lab Sample ID: 160-16732-3

Date Collected: 03/28/16 16:10

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium 235	0.868		0.147	0.172		0.153	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Protactinium 234m	7.38		2.34	2.46		1.74	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Thorium 232	0.422		0.0696	0.0819		0.0637	pCi/g	04/01/16 14:08	04/01/16 16:19	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.135		0.0260	0.0295		0.0204	pCi/g	04/01/16 14:08	04/01/16 16:19	1

Client Sample ID: L08-12-21-T-R-B-00

Lab Sample ID: 160-16732-3

Date Collected: 03/28/16 16:10

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 86.9

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.0014		0.000058	0.000018	mg/Kg	☼	04/01/16 05:05	04/05/16 14:58	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	23.3		0.596	2.22	1.17	0.200	pCi/g	04/01/16 05:05	04/05/16 14:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	98		30 - 110					04/01/16 05:05	04/05/16 14:58	1

Client Sample ID: L08-12-21-T-R-Q-00

Lab Sample ID: 160-16732-4

Date Collected: 03/28/16 16:10

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.488		0.0895	0.102		0.0680	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Americium 241	0.0201	U	0.0573	0.0573		0.0959	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Bismuth 212	1.08		0.378	0.394		0.287	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Bismuth 214	0.566		0.0868	0.105		0.0614	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Lead 212	0.492		0.0598	0.0874		0.0533	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Lead 214	0.678		0.0703	0.0995		0.0586	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Potassium 40	8.85		0.891	1.27		0.326	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Protactinium 231	0.220	U	0.213	0.215		0.909	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Radium 226	0.566		0.0868	0.105	1.00	0.0614	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Thorium 234	2.87		0.539	0.617	1.00	0.755	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Uranium 235	0.919		0.173	0.197		0.188	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Protactinium 234m	-0.333	U	13.3	13.3		4.01	pCi/g	04/01/16 14:08	04/01/16 16:48	1
Thorium 232	0.488		0.0895	0.102		0.0680	pCi/g	04/01/16 14:08	04/01/16 16:48	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-21-T-R-Q-00

Date Collected: 03/28/16 16:10

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-4

Matrix: Solid

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.158		0.0332	0.0371		0.0265	pCi/g	04/01/16 14:08	04/01/16 16:48	1

Client Sample ID: L08-12-21-T-R-Q-00

Date Collected: 03/28/16 16:10

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-4

Matrix: Solid

Percent Solids: 83.4

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.0012		0.000063	0.000019	mg/Kg	☼	04/01/16 05:05	04/05/16 15:02	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	20.8		0.249	1.93	1.26	0.216	pCi/g	04/01/16 05:05	04/05/16 15:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	95		30 - 110					04/01/16 05:05	04/05/16 15:02	1

Client Sample ID: L08-12-22-T-R-B-00

Date Collected: 03/28/16 16:15

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-5

Matrix: Solid

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.913		0.114	0.148		0.0957	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Americium 241	0.0304	U	0.0545	0.0546		0.0904	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Bismuth 212	0.994		0.291	0.309		0.265	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Bismuth 214	0.601		0.0687	0.0928		0.0457	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Lead 212	0.870		0.0754	0.135		0.0660	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Lead 214	0.629		0.0655	0.0926		0.0607	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Potassium 40	16.5		0.956	1.94		0.317	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Protactinium 231	0.332	U	0.154	0.158		0.953	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Radium 226	0.601		0.0687	0.0928	1.00	0.0457	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Thorium 234	3.72		0.553	0.676	1.00	0.765	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Uranium 235	1.08		0.192	0.221		0.236	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Protactinium 234m	3.57	U	2.54	2.57		3.84	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Thorium 232	0.913		0.114	0.148		0.0957	pCi/g	04/01/16 14:08	04/01/16 16:49	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.275		0.0379	0.0474		0.0279	pCi/g	04/01/16 14:08	04/01/16 16:49	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-22-T-R-B-00

Lab Sample ID: 160-16732-5

Date Collected: 03/28/16 16:15

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 83.2

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00020		0.000066	0.000020	mg/Kg	☼	04/01/16 05:05	04/05/16 15:07	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	3.39		0.0536	0.317	1.32	0.225	pCi/g	04/01/16 05:05	04/05/16 15:07	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Re	91		30 - 110	04/01/16 05:05	04/05/16 15:07	1

Client Sample ID: L08-12-23-T-R-B-00

Lab Sample ID: 160-16732-6

Date Collected: 03/28/16 16:20

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	1.17		0.123	0.171		0.115	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Americium 241	-0.00370	U	0.0797	0.0797		0.133	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Bismuth 212	0.987		0.337	0.353		0.448	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Bismuth 214	0.663		0.0976	0.120		0.0757	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Lead 212	1.28		0.0859	0.187		0.0720	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Lead 214	0.722		0.0801	0.110		0.0626	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Potassium 40	18.9		1.14	2.24		0.217	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Protactinium 231	0.773	U	0.289	0.301		0.952	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Radium 226	0.663		0.0976	0.120	1.00	0.0757	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Thorium 234	8.71		0.878	1.27	1.00	1.19	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Uranium 235	4.53		0.292	0.545		0.316	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Protactinium 234m	13.7		4.24	4.46		3.63	pCi/g	04/01/16 14:08	04/01/16 16:50	1
Thorium 232	1.17		0.123	0.171		0.115	pCi/g	04/01/16 14:08	04/01/16 16:50	1

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.389		0.0513	0.0653		0.0384	pCi/g	04/01/16 14:08	04/01/16 16:50	1

Client Sample ID: L08-12-23-T-R-B-00

Lab Sample ID: 160-16732-6

Date Collected: 03/28/16 16:20

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 83.9

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00037		0.000062	0.000018	mg/Kg	☼	04/01/16 05:05	04/05/16 15:11	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	6.26		0.123	0.588	1.23	0.211	pCi/g	04/01/16 05:05	04/05/16 15:11	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-23-T-R-B-00

Date Collected: 03/28/16 16:20

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-6

Matrix: Solid

Percent Solids: 83.9

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Re	97		30 - 110	04/01/16 05:05	04/05/16 15:11	1

Client Sample ID: L08-12-24-T-E-B-00

Date Collected: 03/28/16 16:30

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-7

Matrix: Solid

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.954		0.124	0.158		0.0902	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Americium 241	0.00456	U	0.0752	0.0752		0.126	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Bismuth 212	1.12		0.340	0.360		0.332	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Bismuth 214	0.698		0.0982	0.122		0.0735	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Lead 212	0.957		0.0761	0.145		0.0640	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Lead 214	0.757		0.0852	0.116		0.0650	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Potassium 40	18.3		1.10	2.18		0.289	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Protactinium 231	-0.536	U	0.686	0.689		1.13	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Radium 226	0.698		0.0982	0.122	1.00	0.0735	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Thorium 234	3.90		0.734	0.839	1.00	1.09	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Uranium 235	8.26		0.335	0.905		0.331	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Protactinium 234m	8.06		3.98	4.06		3.81	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Thorium 232	0.954		0.124	0.158		0.0902	pCi/g	04/01/16 14:08	04/01/16 16:52	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.318		0.0482	0.0584		0.0356	pCi/g	04/01/16 14:08	04/01/16 16:52	1

Client Sample ID: L08-12-24-T-E-B-00

Date Collected: 03/28/16 16:30

Date Received: 03/31/16 11:10

Lab Sample ID: 160-16732-7

Matrix: Solid

Percent Solids: 81.1

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00018		0.000067	0.000020	mg/Kg	☼	04/01/16 05:05	04/05/16 15:15	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	3.00		0.138	0.309	1.34	0.229	pCi/g	04/01/16 05:05	04/05/16 15:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	93		30 - 110					04/01/16 05:05	04/05/16 15:15	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-25-T-E-B-00

Lab Sample ID: 160-16732-8

Date Collected: 03/28/16 16:35

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	1.07		0.137	0.175		0.156	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Americium 241	0.00144	U	0.0995	0.0995		0.167	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Bismuth 212	1.59		0.487	0.514		0.454	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Bismuth 214	0.889		0.126	0.156		0.0846	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Lead 212	1.02		0.0954	0.163		0.0821	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Lead 214	0.830		0.0994	0.132		0.0734	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Potassium 40	20.0		1.45	2.51		0.267	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Protactinium 231	0.207	U	0.219	0.220		1.51	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Radium 226	0.889		0.126	0.156	1.00	0.0846	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Thorium 234	2.54		0.529	0.592	1.00	1.26	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Uranium 235	5.61		0.415	0.706		0.395	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Protactinium 234m	4.32	U	4.36	4.38		6.41	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Thorium 232	1.07		0.137	0.175		0.156	pCi/g	04/01/16 14:08	04/01/16 17:43	1
Other Detected			Count	Total						
Radionuclides			Uncert.	Uncert.						
Tl-208	0.367		0.0561	0.0678		0.0389	pCi/g	04/01/16 14:08	04/01/16 17:43	1

Client Sample ID: L08-12-25-T-E-B-00

Lab Sample ID: 160-16732-8

Date Collected: 03/28/16 16:35

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 84.1

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.000056	J	0.000064	0.000019	mg/Kg	☼	04/01/16 05:05	04/05/16 15:20	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	0.967		0.132	0.159	1.28	0.220	pCi/g	04/01/16 05:05	04/05/16 15:20	1
Carrier	%Yield	Qualifier	Limits							
Re	93		30 - 110							
								Prepared	Analyzed	Dil Fac
								04/01/16 05:05	04/05/16 15:20	1

Client Sample ID: L08-12-26-T-R-B-00

Lab Sample ID: 160-16732-9

Date Collected: 03/29/16 16:25

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.937		0.102	0.140		0.0707	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Americium 241	-0.0169	U	0.0571	0.0571		0.0954	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Bismuth 212	1.19		0.323	0.346		0.305	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Bismuth 214	0.696		0.0822	0.109		0.0595	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Lead 212	0.885		0.0687	0.134		0.0579	pCi/g	04/01/16 14:08	04/01/16 17:44	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-26-T-R-B-00

Lab Sample ID: 160-16732-9

Date Collected: 03/29/16 16:25

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Lead 214	0.787		0.0756	0.111		0.0633	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Potassium 40	19.6		1.06	2.26		0.372	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Protactinium 231	0.354	U	0.183	0.187		0.986	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Radium 226	0.696		0.0822	0.109	1.00	0.0595	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Thorium 234	1.40		0.466	0.488	1.00	0.721	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Uranium 235	0.269		0.143	0.145		0.190	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Protactinium 234m	0.683	U	2.58	2.58		4.51	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Thorium 232	0.937		0.102	0.140		0.0707	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.298		0.0359	0.0474		0.0240	pCi/g	04/01/16 14:08	04/01/16 17:44	1

Client Sample ID: L08-12-26-T-R-B-00

Lab Sample ID: 160-16732-9

Date Collected: 03/29/16 16:25

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 85.0

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00092		0.000061	0.000018	mg/Kg	☼	04/01/16 05:05	04/05/16 15:24	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	15.7		0.458	1.51	1.23	0.210	pCi/g	04/01/16 05:05	04/05/16 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	96		30 - 110					04/01/16 05:05	04/05/16 15:24	1

Client Sample ID: L08-12-27-T-R-B-00

Lab Sample ID: 160-16732-10

Date Collected: 03/29/16 16:30

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	1.11		0.129	0.172		0.0963	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Americium 241	-0.00548	U	0.0681	0.0681		0.114	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Bismuth 212	1.42		0.516	0.536		0.431	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Bismuth 214	0.788		0.0987	0.128		0.0715	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Lead 212	0.972		0.0797	0.149		0.0677	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Lead 214	0.697		0.0920	0.117		0.0796	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Potassium 40	19.5		1.27	2.36		0.401	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Protactinium 231	0.975		0.419	0.432		0.596	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Radium 226	0.788		0.0987	0.128	1.00	0.0715	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Thorium 234	5.03		0.742	0.909	1.00	1.04	pCi/g	04/01/16 14:08	04/01/16 17:44	1

TestAmerica St. Louis

Client Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Client Sample ID: L08-12-27-T-R-B-00

Lab Sample ID: 160-16732-10

Date Collected: 03/29/16 16:30

Matrix: Solid

Date Received: 03/31/16 11:10

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium 235	2.03		0.235	0.313		0.256	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Protactinium 234m	12.2		4.27	4.45		3.52	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Thorium 232	1.11		0.129	0.172		0.0963	pCi/g	04/01/16 14:08	04/01/16 17:44	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.342		0.0529	0.0637		0.0392	pCi/g	04/01/16 14:08	04/01/16 17:44	1

Client Sample ID: L08-12-27-T-R-B-00

Lab Sample ID: 160-16732-10

Date Collected: 03/29/16 16:30

Matrix: Solid

Date Received: 03/31/16 11:10

Percent Solids: 86.4

Method: 6020A - Metals (ICP/MS), Tc-99

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00031		0.000064	0.000019	mg/Kg	☼	04/01/16 05:05	04/05/16 15:28	1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	5.39		0.279	0.569	1.29	0.221	pCi/g	04/01/16 05:05	04/05/16 15:28	1
Carrier										
Re	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					04/01/16 05:05	04/05/16 15:28	1

QC Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Method: 6020A - Metals (ICP/MS), Tc-99

Lab Sample ID: MB 160-243094/1-A
Matrix: Solid
Analysis Batch: 244372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243094

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.000050	0.000015	mg/Kg		04/01/16 05:05	04/05/16 14:06	1

Lab Sample ID: LCS 160-243094/2-A
Matrix: Solid
Analysis Batch: 244372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243094

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	0.00119	0.00113		mg/Kg		95	80 - 120

Lab Sample ID: 160-16715-A-1-D MS
Matrix: Solid
Analysis Batch: 244372

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 243094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	0.000050	J	0.00132	0.00132		mg/Kg	☼	97	75 - 125

Lab Sample ID: 160-16715-A-1-E MSD
Matrix: Solid
Analysis Batch: 244372

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 243094

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Technetium 99	0.000050	J	0.00132	0.00131		mg/Kg	☼	96	75 - 125	1	30

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Lab Sample ID: MB 160-243094/1-A
Matrix: Solid
Analysis Batch: 244373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 243094

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	0.03930	U	0.0285	0.0287	0.998	0.171	pCi/g	04/01/16 05:05	04/05/16 14:06	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	100		30 - 110					04/01/16 05:05	04/05/16 14:06	1

Lab Sample ID: LCS 160-243094/2-A
Matrix: Solid
Analysis Batch: 244373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243094

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99	20.3	19.33		1.80	0.993	0.170	pCi/g	95	80 - 120
Carrier	LCS %Yield	LCS Qualifier	Limits						
Re	101		30 - 110						

TestAmerica St. Louis

QC Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity (Continued)

Lab Sample ID: 160-16715-A-1-D MS

Matrix: Solid

Analysis Batch: 244373

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 243094

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99	0.848		22.6	22.65		2.13	1.17	0.200	pCi/g	97	75 - 125
Carrier	MS %Yield	MS Qualifier	Limits								
Re	95		30 - 110								

Lab Sample ID: 160-16715-A-1-E MSD

Matrix: Solid

Analysis Batch: 244373

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 243094

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Technetium 99	0.848		22.5	22.40		2.14	1.16	0.198	pCi/g	96	75 - 125	0.06	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Re	96		30 - 110										

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-243328/1-A

Matrix: Solid

Analysis Batch: 243329

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 243328

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.01161	U	0.0294	0.0294		0.0556	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Americium 241	-0.0007794	U	0.0102	0.0102		0.0195	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Bismuth 212	-0.01854	U	0.145	0.145		0.278	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Bismuth 214	-0.01028	U	0.107	0.107		0.0522	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Lead 212	0.002493	U	0.0141	0.0141		0.0282	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Lead 214	-0.004754	U	0.0499	0.0499		0.0364	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Potassium 40	-0.0006656	U	0.0873	0.0873		0.254	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Protactinium 231	0.0000	U	0.105	0.105		0.265	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Radium 226	-0.01028	U	0.107	0.107	1.00	0.0522	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Thorium 234	0.03316	U	0.137	0.137	1.00	0.281	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Uranium 235	-0.01312	U	0.525	0.525		0.0749	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Protactinium 234m	-0.3801	U	15.2	15.2		5.24	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Thorium 232	0.01161	U	0.0294	0.0294		0.0556	pCi/g	04/01/16 14:08	04/01/16 16:15	1
Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	04/01/16 14:08	04/01/16 16:15	1

TestAmerica St. Louis

QC Sample Results

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Method: GA-01-R - Cesium-137 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-243328/2-A
Matrix: Solid
Analysis Batch: 243330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243328

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium 241	101	95.81		9.97		0.498	pCi/g	95	87 - 116
Cesium 137	34.1	32.43		3.39	0.200	0.151	pCi/g	95	87 - 120
Cobalt 60	31.7	29.61		2.99		0.120	pCi/g	93	87 - 115

Lab Sample ID: 160-16732-1 DU
Matrix: Solid
Analysis Batch: 243333

Client Sample ID: L08-12-19-T-R-B-00
Prep Type: Total/NA
Prep Batch: 243328

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Actinium 228	1.25		1.359		0.221		0.111	pCi/g	0.28	1
Americium 241	-0.0178	U	-0.00840	U	0.792		0.100	pCi/g	0.01	1
Bismuth 212	0.963		1.862		0.476		0.327	pCi/g	1.01	1
Bismuth 214	0.779		0.8501		0.129		0.0664	pCi/g	0.27	1
Lead 212	1.01		1.181		0.183		0.0851	pCi/g	0.49	1
Lead 214	0.889		0.9323		0.127		0.0720	pCi/g	0.17	1
Potassium 40	17.9		22.96		2.62		0.350	pCi/g	1.04	1
Protactinium 231	0.694	U	0.5724	U	0.234		1.25	pCi/g	0.24	1
Radium 226	0.779		0.8501		0.129	1.00	0.0664	pCi/g	0.27	1
Thorium 234	1.08		1.721		0.589	1.00	0.872	pCi/g	0.67	1
Uranium 235	0.927		1.007		0.245		0.248	pCi/g	0.17	1
Protactinium 234m	1.44	U	4.256	U	2.66		5.63	pCi/g	0.58	1
Thorium 232	1.25		1.359		0.221		0.111	pCi/g	0.28	1
Other Detected Radionuclides	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Tl-208	0.340		0.4108		0.0653		0.0352	pCi/g	0.55	1

QC Association Summary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Metals

Prep Batch: 243094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16715-A-1-D MS	Matrix Spike	Total/NA	Solid	None	
160-16715-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	None	
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	None	
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	None	
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	None	
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	None	
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	None	
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	None	
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	None	
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	None	
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	None	
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	None	
LCS 160-243094/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-243094/1-A	Method Blank	Total/NA	Solid	None	

Analysis Batch: 244372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16715-A-1-D MS	Matrix Spike	Total/NA	Solid	6020A	243094
160-16715-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	6020A	243094
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	6020A	243094
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	6020A	243094
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	6020A	243094
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	6020A	243094
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	6020A	243094
LCS 160-243094/2-A	Lab Control Sample	Total/NA	Solid	6020A	243094
MB 160-243094/1-A	Method Blank	Total/NA	Solid	6020A	243094

General Chemistry

Analysis Batch: 243095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-1 DU	L08-12-19-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	Moisture	
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	Moisture	
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	Moisture	
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	Moisture	
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	Moisture	

TestAmerica St. Louis

QC Association Summary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Rad

Leach Batch: 243044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-1 DU	L08-12-19-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	Dry and Grind	
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	Dry and Grind	
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	Dry and Grind	
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	Dry and Grind	
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	Dry and Grind	

Prep Batch: 243094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16715-A-1-D MS	Matrix Spike	Total/NA	Solid	None	
160-16715-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	None	
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	None	
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	None	
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	None	
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	None	
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	None	
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	None	
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	None	
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	None	
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	None	
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	None	
LCS 160-243094/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-243094/1-A	Method Blank	Total/NA	Solid	None	

Prep Batch: 243328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-16732-1	L08-12-19-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-1 DU	L08-12-19-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-2	L08-12-20-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-3	L08-12-21-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-4	L08-12-21-T-R-Q-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-5	L08-12-22-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-6	L08-12-23-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-7	L08-12-24-T-E-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-8	L08-12-25-T-E-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-9	L08-12-26-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
160-16732-10	L08-12-27-T-R-B-00	Total/NA	Solid	Fill_Geo-0	243044
LCS 160-243328/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
MB 160-243328/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	

Tracer/Carrier Summary

Client: Westinghouse Electric Company LLC
Project/Site: HDP RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-16732-1

Method: 6020A - Metals (ICP/MS), Tc-99 in Activity

Matrix: Solid

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Re (30-110)
160-16715-A-1-D MS	Matrix Spike	95
160-16715-A-1-E MSD	Matrix Spike Duplicate	96
160-16732-1	L08-12-19-T-R-B-00	92
160-16732-2	L08-12-20-T-R-B-00	97
160-16732-3	L08-12-21-T-R-B-00	98
160-16732-4	L08-12-21-T-R-Q-00	95
160-16732-5	L08-12-22-T-R-B-00	91
160-16732-6	L08-12-23-T-R-B-00	97
160-16732-7	L08-12-24-T-E-B-00	93
160-16732-8	L08-12-25-T-E-B-00	93
160-16732-9	L08-12-26-T-R-B-00	96
160-16732-10	L08-12-27-T-R-B-00	90
LCS 160-243094/2-A	Lab Control Sample	101
MB 160-243094/1-A	Method Blank	100

Tracer/Carrier Legend

Re = Re