

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: 160-3435-1

Client Project/Site: RFP-CBA-022 (7 DAY TAT)
Revision: 1

For:

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

Attn: Martin Swanson



Authorized for release by:
8/28/2013 6:04:59 PM

Ivan Vania, Project Manager I
ivan.vania@testamericainc.com

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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: RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-3435-1

Job ID: 160-3435-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Westinghouse Electric Company LLC

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

Report Number: 160-3435-1 - Revision 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. This revision contains revised data for the following samples. Sample 160-3435-26 was initially counted for gamma spec analysis on a detector that was not calibrated for the geometry used. The sample was recounted on a correctly calibrated detector and the recount results are reported in this revision. Samples 160-3435-13 and 160-3435-19 were processed against an incorrect calibration. The data was reprocessed using the correct calibration and the reprocessed results are reported in this revision.

RECEIPT

The samples were received on 08/20/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 22.0° C and 22.0° C.

TECHNETIUM-99 (ICPMS)

Samples L050190TUB00 (160-3435-1), L050191TUB00 (160-3435-2), L050192TUB00 (160-3435-3), L050193TUB00 (160-3435-4), L050194TUB00 (160-3435-5), L050195TUB00 (160-3435-6), L050196TUB00 (160-3435-7), L050197TUB00 (160-3435-8), L050247PRS00 (160-3435-9), L050248PES00 (160-3435-10), L050249PRS00 (160-3435-11), L050250PES00 (160-3435-12), L050251PRS00 (160-3435-13), L050252PES00 (160-3435-14), L050253PES00 (160-3435-15), L050254PES00 (160-3435-16), L050255PES00 (160-3435-17), L050256PRS00 (160-3435-18), L050257PES00 (160-3435-19), L050258PES00 (160-3435-20), L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050260PES00 (160-3435-23), L050261PRS00 (160-3435-24),

Case Narrative

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

TestAmerica Job ID: 160-3435-1

Job ID: 160-3435-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

L050262PES00 (160-3435-25), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28), L050266PUB00 (160-3435-29), L050267PUB00 (160-3435-30) and L050268PUB00 (160-3435-31) were analyzed for Technetium-99 (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 08/22/2013 and analyzed on 08/23/2013.

No difficulties were encountered during the Tc-99 analysis. All quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples L050190TUB00 (160-3435-1), L050191TUB00 (160-3435-2), L050192TUB00 (160-3435-3), L050193TUB00 (160-3435-4), L050194TUB00 (160-3435-5), L050195TUB00 (160-3435-6), L050196TUB00 (160-3435-7), L050197TUB00 (160-3435-8), L050247PRS00 (160-3435-9), L050248PES00 (160-3435-10), L050249PRS00 (160-3435-11), L050250PES00 (160-3435-12), L050251PRS00 (160-3435-13), L050252PES00 (160-3435-14), L050253PES00 (160-3435-15), L050254PES00 (160-3435-16), L050255PES00 (160-3435-17), L050256PRS00 (160-3435-18), L050257PES00 (160-3435-19), L050258PES00 (160-3435-20), L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050260PES00 (160-3435-23), L050261PRS00 (160-3435-24), L050262PES00 (160-3435-25), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28), L050266PUB00 (160-3435-29), L050267PUB00 (160-3435-30) and L050268PUB00 (160-3435-31) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/22/2013.

No difficulties were encountered during the % solids analysis. All quality control parameters were within the acceptance limits.

CESIUM-137 & OTHER GAMMA EMITTERS (GS)

Samples L050190TUB00 (160-3435-1), L050191TUB00 (160-3435-2), L050192TUB00 (160-3435-3), L050193TUB00 (160-3435-4), L050194TUB00 (160-3435-5), L050195TUB00 (160-3435-6), L050196TUB00 (160-3435-7), L050197TUB00 (160-3435-8), L050247PRS00 (160-3435-9), L050248PES00 (160-3435-10), L050249PRS00 (160-3435-11), L050250PES00 (160-3435-12), L050251PRS00 (160-3435-13), L050252PES00 (160-3435-14), L050253PES00 (160-3435-15), L050254PES00 (160-3435-16), L050255PES00 (160-3435-17), L050256PRS00 (160-3435-18), L050257PES00 (160-3435-19), L050258PES00 (160-3435-20), L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050260PES00 (160-3435-23), L050261PRS00 (160-3435-24), L050262PES00 (160-3435-25), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28), L050266PUB00 (160-3435-29), L050267PUB00 (160-3435-30) and L050268PUB00 (160-3435-31) were analyzed for Cesium-137 & Other Gamma Emitters (GS) in accordance with DOE GA-01-R. The samples were leached on 08/21/2013, prepared on 08/23/2013 and analyzed on 08/23/2013, 08/25/2013, and 08/28/2013.

Preparation Batch 68361:

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 a 21-day 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. (160-3435-31 DU), (LCS 160-68361/2-A), (MB 160-68361/1-A), L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050260PES00 (160-3435-23), L050261PRS00 (160-3435-24), L050262PES00 (160-3435-25), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28), L050266PUB00 (160-3435-29), L050267PUB00 (160-3435-30), L050268PUB00 (160-3435-31)

Lead-214 analyzed by gamma spectroscopy was detected above the MDC in the method blank. Variations in Compton backgrounds and statistical analyses allow for small area counts in the ROIs of this nuclide. Other Uranium decay chain products are not present in the blank to support Lead-214 identification. The data is reported. (160-3435-31 DU), (LCS 160-68361/2-A), (MB 160-68361/1-A), L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050260PES00 (160-3435-23), L050261PRS00 (160-3435-24), L050262PES00 (160-3435-25), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28), L050266PUB00 (160-3435-29), L050267PUB00 (160-3435-30), L050268PUB00 (160-3435-31)

The reporting limit for Thorium-234 was not met due to insufficient sample weight available for analysis. Analytical results are reported with the MDC achieved. L050259PRQ00 (160-3435-21), L050259PRS00 (160-3435-22), L050261PRS00 (160-3435-24), L050263PES00 (160-3435-26), L050264PRS00 (160-3435-27), L050265PES00 (160-3435-28)

Preparation Batch 68149:

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 a 21-day 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. (160-3435-1 DU), (LCS 160-68149/2-A), (MB 160-68149/1-A), L050190TUB00 (160-3435-1), L050191TUB00 (160-3435-2),

Case Narrative

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

TestAmerica Job ID: 160-3435-1

Job ID: 160-3435-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

L050192TUB00 (160-3435-3), L050193TUB00 (160-3435-4), L050194TUB00 (160-3435-5), L050195TUB00 (160-3435-6), L050196TUB00 (160-3435-7), L050197TUB00 (160-3435-8), L050247PRS00 (160-3435-9), L050248PES00 (160-3435-10), L050249PRS00 (160-3435-11), L050250PES00 (160-3435-12), L050251PRS00 (160-3435-13), L050252PES00 (160-3435-14), L050253PES00 (160-3435-15), L050254PES00 (160-3435-16), L050255PES00 (160-3435-17), L050256PRS00 (160-3435-18), L050257PES00 (160-3435-19), L050258PES00 (160-3435-20)

The reporting limit for Thorium-234 was not met due to insufficient sample weight available for analysis. Analytical results are reported with the MDC achieved. L050251PRS00 (160-3435-13), L050253PES00 (160-3435-15), L050254PES00 (160-3435-16), L050257PES00 (160-3435-19)

No other difficulties were encountered during the Gamma spec analysis. All other quality control parameters were within the acceptance limits.

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-082013-01				Page				1/1			
Project Name:				Westinghouse Electric Company				Contact Person:				Gerald Rood			
Phone Number:				314-810-3382				Sampler Name:				Thomas Yardy			
Sample ID				Date				Time				Matrix			
L050190TUB00				8/19/2013				13:45				S			
L050191TUB00				8/19/2013				13:55				S			
L050192TUB00				8/19/2013				14:05				S			
L050193TUB00				8/19/2013				14:15				S			
L050194TUB00				8/19/2013				14:25				S			
L050195TUB00				8/19/2013				14:35				S			
L050196TUB00				8/19/2013				14:45				S			
L050197TUB00				8/19/2013				14:55				S			
Relinquished by:				Date/Time				Received by:				Date/Time			
Company Name:				8-20-13				Company Name:				8-20			
Received by:				1600				Company Name:				1609			
Company Name:				Date/Time				Relinquished by:				Date/Time			
Relinquished by:				8-20				Company Name:				8-20			
Company Name:				18193				Received by:				Date/Time			
Relinquished by:				8-20-13				Company Name:				8-20-13			
Company Name:				18193				Received by:				Date/Time			
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Relinquished by:				8-20-13				Company Name:				8-20-13			
Company Name:				18193											

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LSA 05-01 Bias

LSA 05-01 Bias

Hematite Decommissioning Project

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

Revision: 3

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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-081913-01 Page 1/2				Requested Analysis										Laboratory Name:		
Project Name:				Comp (C) or Grab (G)	Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	TA-MO	
Westinghouse Electric Company															Laboratory Address:	
Contact Person:															13715 Rider Trail North	
Gerald Rood															Phone No.	
314-810-3382															314-298-8566	
Phone Number:				Laboratory Contact Person:												
314-810-3382				Joe Walker												
Sampler Name				Phone No.												
Scott Jenkins				708-870-8453												
				Turn Around Time												
				Rush (7 days)												
				Remarks												
Sample ID	Date	Time	Matrix													
L050247PRS00	8/16/2013	15:40	S	C	X		X	X						1	LSA 05-02 Sys	
L050248PES00	8/16/2013	15:55	S	C	X		X	X						1		
L050249PRS00	8/16/2013	14:15	S	C	X		X	X						1		
L050250PES00	8/16/2013	14:25	S	C	X		X	X						1		
L050251PRS00	8/19/2013	8:35	S	C	X		X	X						1		
L050252PES00	8/19/2013	10:15	S	C	X		X	X						1		
L050253PES00	8/19/2013	8:45	S	C	X		X	X						1		
L050254PES00	8/19/2013	8:40	S	C	X		X	X						1		
L050255PES00	8/16/2013	13:50	S	C	X		X	X						1		
L050256PRS00	8/19/2013	8:55	S	C	X		X	X						1		
L050257PES00	8/19/2013	10:20	S	C	X		X	X						1		
L050258PES00	8/16/2013	13:40	S	C	X		X	X						1	LSA 05-02 Sys	

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
<i>[Signature]</i>	8-20-13 1600	<i>[Signature]</i>	8-20 1609	23	Ambient
Company Name:		Company Name:		Cooler ID:	Shipper and Number:
WEC		Crossroads		0816-02/	0820-02
Received by:	Date/Time	Relinquished by:	Date/Time	Comments: Please re-analyze samples after 21-day ingrowth period.	
<i>[Signature]</i>		<i>[Signature]</i>	8-20 1843		
Company Name:		Company Name:			
		Crossroads			
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
<i>[Signature]</i>		<i>[Signature]</i>	8-20-13 1843	<i>[Signature]</i>	
Company Name:		Company Name:			
		TESTAMERICA			

Hematite Decommissioning Project

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

Revision: 3

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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-081913-01 Page 2/2				Requested Analysis										Laboratory Name:			
Project Name:				Comp (C) or Grab (G)	Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)							Total Containers	TA-MO	
Westinghouse Electric Company																Laboratory Address:	
Contact Person:																13715 Rider Trail North	
Phone Number:																Phone No.	
314-810-3382																314-298-8566	
Sampler Name				Laboratory Contact Person:													
Scott Jenkins				Joe Walker													
				Phone No.													
				708-870-8453													
				Turn Around Time													
				Rush (7 days)													
				Remarks													
Sample ID	Date	Time	Matrix														
L050259PRQ00	8/16/2013	15:20	S	C	X		X	X							1	LSA 05-02 Sys	
L050259PRS00	8/16/2013	15:20	S	C	X		X	X							1		
L050260PES00	8/16/2013	15:30	S	C	X		X	X							1		
L050261PRS00	8/19/2013	9:05	S	C	X		X	X							1		
L050262PES00	8/19/2013	10:30	S	C	X		X	X							1		
L050263PES00	8/16/2013	13:30	S	C	X		X	X							1		
L050264PRS00	8/16/2013	14:50	S	C	X		X	X							1		
L050265PES00	8/16/2013	15:00	S	C	X		X	X							1	LSA 05-02 Sys	
L050266PUB00	8/16/2013	11:50	S	C	X		X	X							1	LSA 05-02 Bias	
L050267PUB00	8/16/2013	11:55	S	C	X		X	X							1	LSA 05-02 Bias	
L050268PUB00	8/16/2013	12:00	S	C	X		X	X							1	LSA 05-02 Bias	
Relinquished by: <i>[Signature]</i>				Date/Time: 8-20-13 1600	Received by: <i>[Signature]</i>				Date/Time: 8-20 16:04	Total: 23	Cooler Temperature: Ambient						
Company Name: WEC					Company Name: Crossroads					Cooler ID: 0816-02/	Shipper and Number: 0820-02						
Received by:				Date/Time:	Relinquished by: <i>[Signature]</i>				Date/Time: 8-20 18:43	Comments: Please re-analyze samples after 21-day ingrowth period.							
Company Name:					Company Name: Crossroads												
Relinquished by:				Date/Time:	Received by: <i>[Signature]</i>				Date/Time: 8-20-13 18:43	Verified By: <i>[Signature]</i>							
Company Name:					Company Name: TEST America												

Login Sample Receipt Checklist

Client: Westinghouse Electric Company LLC

Job Number: 160-3435-1

Login Number: 3435

List Source: TestAmerica St. Louis

List Number: 1

Creator: Daniels, Brian J

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.	False	
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.	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: RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-3435-1

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	Indicates the analyte was analyzed for but not detected.
F	Duplicate RPD exceeds the control 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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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: RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-3435-1

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: RFP-CBA-022 (7 DAY TAT)

TestAmerica Job ID: 160-3435-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3435-1	L050190TUB00	Solid	08/19/13 13:45	08/20/13 16:06
160-3435-2	L050191TUB00	Solid	08/19/13 13:55	08/20/13 16:06
160-3435-3	L050192TUB00	Solid	08/19/13 14:05	08/20/13 16:06
160-3435-4	L050193TUB00	Solid	08/19/13 14:15	08/20/13 16:06
160-3435-5	L050194TUB00	Solid	08/19/13 14:25	08/20/13 16:06
160-3435-6	L050195TUB00	Solid	08/19/13 14:35	08/20/13 16:06
160-3435-7	L050196TUB00	Solid	08/19/13 14:45	08/20/13 16:06
160-3435-8	L050197TUB00	Solid	08/19/13 14:55	08/20/13 16:06
160-3435-9	L050247PRS00	Solid	08/16/13 15:40	08/20/13 16:06
160-3435-10	L050248PES00	Solid	08/16/13 15:55	08/20/13 16:06
160-3435-11	L050249PRS00	Solid	08/16/13 14:15	08/20/13 16:06
160-3435-12	L050250PES00	Solid	08/16/13 14:25	08/20/13 16:06
160-3435-13	L050251PRS00	Solid	08/19/13 08:35	08/20/13 16:06
160-3435-14	L050252PES00	Solid	08/19/13 10:15	08/20/13 16:06
160-3435-15	L050253PES00	Solid	08/19/13 08:45	08/20/13 16:06
160-3435-16	L050254PES00	Solid	08/19/13 08:40	08/20/13 16:06
160-3435-17	L050255PES00	Solid	08/16/13 13:50	08/20/13 16:06
160-3435-18	L050256PRS00	Solid	08/19/13 08:55	08/20/13 16:06
160-3435-19	L050257PES00	Solid	08/19/13 10:20	08/20/13 16:06
160-3435-20	L050258PES00	Solid	08/16/13 13:40	08/20/13 16:06
160-3435-21	L050259PRQ00	Solid	08/19/13 15:20	08/20/13 16:06
160-3435-22	L050259PRS00	Solid	08/16/13 15:20	08/20/13 16:06
160-3435-23	L050260PES00	Solid	08/16/13 15:30	08/20/13 16:06
160-3435-24	L050261PRS00	Solid	08/16/13 09:05	08/20/13 16:06
160-3435-25	L050262PES00	Solid	08/19/13 10:30	08/20/13 16:06
160-3435-26	L050263PES00	Solid	08/19/13 13:30	08/20/13 16:06
160-3435-27	L050264PRS00	Solid	08/16/13 14:50	08/20/13 16:06
160-3435-28	L050265PES00	Solid	08/16/13 15:00	08/20/13 16:06
160-3435-29	L050266PUB00	Solid	08/16/13 11:50	08/20/13 16:06
160-3435-30	L050267PUB00	Solid	08/16/13 11:55	08/20/13 16:06
160-3435-31	L050268PUB00	Solid	08/16/13 12:00	08/20/13 16:06

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050190TUB00

Lab Sample ID: 160-3435-1

Date Collected: 08/19/13 13:45

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 77.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00071	0.000021	mg/Kg	☆	08/22/13 08:34	08/23/13 17:48	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	0.234	U	0.0756	0.0869	1.43	0.244	pCi/g	08/22/13 08:34	08/23/13 17:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 17:48	1

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	0.932		0.116	0.150		0.112	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Americium 241	-0.0189	U	0.0615	0.0616		0.103	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Bismuth 212	1.48		0.394	0.422		0.307	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Bismuth 214	0.752		0.0968	0.124		0.0691	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Lead 212	0.931		0.0696	0.139		0.0574	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Lead 214	0.832		0.0845	0.121		0.0725	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Potassium 40	16.7		1.11	2.03		0.373	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Protactinium 231	0.518	U	0.306	0.311		1.00	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Radium 226	0.752		0.0968	0.124	1.00	0.0691	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Thorium 234	1.08		0.566	0.578	1.00	0.757	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Uranium 235	0.155	U	0.150	0.151		0.194	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Protactinium 234m	4.37	U	2.02	2.07		5.44	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Thorium 232	0.932		0.116	0.150		0.112	pCi/g	08/23/13 09:35	08/23/13 16:19	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.299		0.0438	0.0537		0.0325	pCi/g	08/23/13 09:35	08/23/13 16:19	1

Client Sample ID: L050191TUB00

Lab Sample ID: 160-3435-2

Date Collected: 08/19/13 13:55

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.000090	J	0.00071	0.000021	mg/Kg	☆	08/22/13 08:34	08/23/13 18:00	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	1.54		0.0452	0.165	1.42	0.242	pCi/g	08/22/13 08:34	08/23/13 18:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 18:00	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050191TUB00

Lab Sample ID: 160-3435-2

Date Collected: 08/19/13 13:55

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	0.842		0.119	0.147		0.108	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Americium 241	0.0231	U	0.0631	0.0631		0.106	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Bismuth 212	0.632		0.378	0.384		0.555	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Bismuth 214	0.690		0.109	0.130		0.0819	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Lead 212	0.723		0.0743	0.119		0.0701	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Lead 214	0.710		0.0896	0.116		0.0691	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Potassium 40	12.7		1.17	1.75		0.197	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Protactinium 231	0.349	U	0.283	0.285		1.18	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Radium 226	0.690		0.109	0.130	1.00	0.0819	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Thorium 234	1.05		0.355	0.372	1.00	0.923	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Uranium 235	0.0829	U	0.171	0.171		0.282	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Protactinium 234m	1.69	U	3.04	3.04		5.20	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Thorium 232	0.842		0.119	0.147		0.108	pCi/g	08/23/13 09:35	08/23/13 16:20	1
Other Detected			Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radionuclides			Uncert.	Uncert.						
	Result	Qualifier	(2σ+/-)	(2σ+/-)						
Tl-208	0.250		0.0617	0.0670		0.0521	pCi/g	08/23/13 09:35	08/23/13 16:20	1

Client Sample ID: L050192TUB00

Lab Sample ID: 160-3435-3

Date Collected: 08/19/13 14:05

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 74.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00096		0.00074	0.000022	mg/Kg	☆	08/22/13 08:34	08/23/13 18:04	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	16.5		0.505	1.77	1.48	0.254	pCi/g	08/22/13 08:34	08/23/13 18:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	91		30 - 110					08/22/13 08:34	08/23/13 18:04	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	0.317		0.0728	0.0797		0.0708	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Americium 241	0.00657	U	0.0469	0.0470		0.0797	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Bismuth 212	0.310	U	0.214	0.217		0.315	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Bismuth 214	0.664		0.0851	0.110		0.0548	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Lead 212	0.265		0.0416	0.0539		0.0447	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Lead 214	0.708		0.0722	0.103		0.0331	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Potassium 40	3.32		0.506	0.610		0.264	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Protactinium 231	0.150	U	0.149	0.150		0.854	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Radium 226	0.664		0.0851	0.110	1.00	0.0548	pCi/g	08/23/13 09:35	08/23/13 16:31	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050192TUB00

Lab Sample ID: 160-3435-3

Date Collected: 08/19/13 14:05

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	1.36		0.297	0.329	1.00	0.673	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Uranium 235	0.371		0.126	0.131		0.176	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Protactinium 234m	4.94		2.08	2.14		3.91	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Thorium 232	0.317		0.0728	0.0797		0.0708	pCi/g	08/23/13 09:35	08/23/13 16:31	1
Other Detected			Count	Total						
Radionuclides			Uncert.	Uncert.						
	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.103		0.0282	0.0302		0.0263	pCi/g	08/23/13 09:35	08/23/13 16:31	1

Client Sample ID: L050193TUB00

Lab Sample ID: 160-3435-4

Date Collected: 08/19/13 14:15

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 75.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00025	J	0.00073	0.00022	mg/Kg	☆	08/22/13 08:34	08/23/13 18:08	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	4.32		0.332	0.573	1.45	0.249	pCi/g	08/22/13 08:34	08/23/13 18:08	1
Carrier	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Re	90		30 - 110				08/22/13 08:34		08/23/13 18:08	1

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	0.748		0.109	0.133		0.122	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Americium 241	0.0416	U	0.0621	0.0623		0.103	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Bismuth 212	1.14		0.365	0.384		0.287	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Bismuth 214	0.668		0.104	0.125		0.0665	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Lead 212	0.721		0.0733	0.119		0.0625	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Lead 214	0.731		0.0892	0.117		0.0865	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Potassium 40	13.2		1.25	1.84		0.356	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Protactinium 231	0.455	U	0.310	0.314		1.22	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Radium 226	0.668		0.104	0.125	1.00	0.0665	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Thorium 234	1.58		0.727	0.745	1.00	0.937	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Uranium 235	0.270		0.176	0.178		0.214	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Protactinium 234m	2.52	U	2.29	2.30		7.46	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Thorium 232	0.748		0.109	0.133		0.122	pCi/g	08/23/13 09:35	08/23/13 17:04	1
Other Detected			Count	Total						
Radionuclides			Uncert.	Uncert.						
	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.243		0.0469	0.0533		0.0317	pCi/g	08/23/13 09:35	08/23/13 17:04	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050194TUB00

Lab Sample ID: 160-3435-5

Date Collected: 08/19/13 14:25

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 69.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.000066	J	0.00081	0.000024	mg/Kg	☼	08/22/13 08:34	08/23/13 18:12	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	1.12		0.138	0.193	1.61	0.276	pCi/g	08/22/13 08:34	08/23/13 18:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	89		30 - 110					08/22/13 08:34	08/23/13 18:12	1

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	0.887		0.104	0.138		0.0741	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Americium 241	0.0102	U	0.0587	0.0587		0.0990	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Bismuth 212	1.17		0.307	0.330		0.217	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Bismuth 214	0.605		0.0804	0.102		0.0597	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Lead 212	0.914		0.0670	0.136		0.0478	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Lead 214	0.759		0.0819	0.114		0.0596	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Potassium 40	14.6		1.03	1.81		0.318	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Protactinium 231	0.461	U	0.313	0.317		0.883	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Radium 226	0.605		0.0804	0.102	1.00	0.0597	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Thorium 234	1.33		0.606	0.622	1.00	0.782	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Uranium 235	0.113	U	0.124	0.125		0.204	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Protactinium 234m	1.59	U	2.86	2.87		4.85	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Thorium 232	0.887		0.104	0.138		0.0741	pCi/g	08/23/13 09:35	08/23/13 17:08	1
Other Detected			Count Uncert.	Total Uncert.						
Radionuclides	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.246		0.0412	0.0485		0.0311	pCi/g	08/23/13 09:35	08/23/13 17:08	1

Client Sample ID: L050195TUB00

Lab Sample ID: 160-3435-6

Date Collected: 08/19/13 14:35

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 72.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.00010	J	0.00077	0.000023	mg/Kg	☼	08/22/13 08:34	08/23/13 18:16	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	1.77		0.118	0.224	1.55	0.265	pCi/g	08/22/13 08:34	08/23/13 18:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 18:16	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050195TUB00

Lab Sample ID: 160-3435-6

Date Collected: 08/19/13 14:35

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	0.539		0.112	0.125		0.112	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Americium 241	0.0181	U	0.0512	0.0512		0.0862	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Bismuth 212	0.229	U	0.309	0.310		0.512	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Bismuth 214	0.421		0.0838	0.0946		0.0680	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Lead 212	0.558		0.0644	0.0968		0.0642	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Lead 214	0.554		0.0780	0.0970		0.0557	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Potassium 40	11.9		1.09	1.64		0.184	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Protactinium 231	0.307	U	0.350	0.352		1.06	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Radium 226	0.421		0.0838	0.0946	1.00	0.0680	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Thorium 234	0.972		0.666	0.674	1.00	0.821	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Uranium 235	0.0459	U	0.131	0.131		0.221	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Protactinium 234m	1.30	U	3.23	3.23		5.62	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Thorium 232	0.539		0.112	0.125		0.112	pCi/g	08/23/13 09:35	08/23/13 17:09	1
Other Detected										
Radionuclides	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Tl-208	0.209		0.0434	0.0485		0.0326	pCi/g	08/23/13 09:35	08/23/13 17:09	1

Client Sample ID: L050196TUB00

Lab Sample ID: 160-3435-7

Date Collected: 08/19/13 14:45

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00067	0.000020	mg/Kg	☼	08/22/13 08:34	08/23/13 18:19	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.299		0.0651	0.0765	1.33	0.228	pCi/g	08/22/13 08:34	08/23/13 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	92		30 - 110					08/22/13 08:34	08/23/13 18:19	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	0.600		0.0888	0.108		0.0481	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Americium 241	-0.000662	U	0.0424	0.0424		0.0724	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Bismuth 212	0.896		0.258	0.274		0.207	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Bismuth 214	0.522		0.0799	0.0966		0.0613	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Lead 212	0.534		0.0513	0.0860		0.0445	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Lead 214	0.601		0.0688	0.0929		0.0538	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Potassium 40	13.4		0.962	1.68		0.302	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Protactinium 231	-0.464	U	0.521	0.523		0.853	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Radium 226	0.522		0.0799	0.0966	1.00	0.0613	pCi/g	08/23/13 09:35	08/23/13 17:10	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050196TUB00

Lab Sample ID: 160-3435-7

Date Collected: 08/19/13 14:45

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	0.749		0.406	0.413	1.00	0.594	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Uranium 235	0.0864	U	0.0988	0.0992		0.145	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Protactinium 234m	0.857	U	2.21	2.21		3.84	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Thorium 232	0.600		0.0888	0.108		0.0481	pCi/g	08/23/13 09:35	08/23/13 17:10	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.166		0.0360	0.0399		0.0305	pCi/g	08/23/13 09:35	08/23/13 17:10	1

Client Sample ID: L050197TUB00

Lab Sample ID: 160-3435-8

Date Collected: 08/19/13 14:55

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 72.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00076	0.000023	mg/Kg	☆	08/22/13 08:34	08/23/13 18:23	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	0.195	U	0.00543	0.0206	1.52	0.260	pCi/g	08/22/13 08:34	08/23/13 18:23	1
Carrier										
Re	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
	91		30 - 110					08/22/13 08:34	08/23/13 18:23	1

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	0.604		0.138	0.150		0.106	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Americium 241	-0.0126	U	0.112	0.112		0.0957	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Bismuth 212	0.637		0.318	0.324		0.448	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Bismuth 214	0.570		0.0918	0.107		0.0699	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Lead 212	0.687		0.0640	0.0978		0.0533	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Lead 214	0.642		0.0804	0.102		0.0673	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Potassium 40	13.3		1.11	1.70		0.415	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Protactinium 231	0.285	U	0.411	0.412		0.796	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Radium 226	0.570		0.0918	0.107	1.00	0.0699	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Thorium 234	0.898		0.550	0.557	1.00	0.733	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Uranium 235	0.117	U	0.117	0.117		0.177	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Protactinium 234m	1.22	U	2.94	2.95		5.10	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Thorium 232	0.604		0.138	0.150		0.106	pCi/g	08/23/13 09:35	08/23/13 16:21	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.222		0.0381	0.0438		0.0285	pCi/g	08/23/13 09:35	08/23/13 16:21	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050247PRS00

Lab Sample ID: 160-3435-9

Date Collected: 08/16/13 15:40

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 86.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00064	0.000019	mg/Kg	☼	08/22/13 08:34	08/23/13 18:35	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	0.171	U	0.0982	0.111	1.28	0.220	pCi/g	08/22/13 08:34	08/23/13 18:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 18:35	1

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	1.20		0.161	0.199		0.141	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Americium 241	-0.0193	U	0.209	0.209		0.114	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Bismuth 212	1.73		0.523	0.549		0.425	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Bismuth 214	0.883		0.104	0.135		0.0639	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Lead 212	1.10		0.0821	0.144		0.0680	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Lead 214	0.823		0.0848	0.116		0.0781	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Potassium 40	19.8		1.33	2.33		0.311	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Protactinium 231	0.300	U	0.574	0.574		0.966	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Radium 226	0.883		0.104	0.135	1.00	0.0639	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Thorium 234	1.56		0.625	0.643	1.00	0.823	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Uranium 235	0.331		0.148	0.151		0.221	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Protactinium 234m	2.00	U	3.57	3.58		5.31	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Thorium 232	1.20		0.161	0.199		0.141	pCi/g	08/23/13 09:35	08/23/13 17:11	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.336		0.0551	0.0640		0.0436	pCi/g	08/23/13 09:35	08/23/13 17:11	1

Client Sample ID: L050248PES00

Lab Sample ID: 160-3435-10

Date Collected: 08/16/13 15:55

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 84.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00065	0.000019	mg/Kg	☼	08/22/13 08:34	08/23/13 18:39	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	0.0845	U	0.0373	0.0420	1.30	0.222	pCi/g	08/22/13 08:34	08/23/13 18:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	91		30 - 110					08/22/13 08:34	08/23/13 18:39	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050248PES00

Lab Sample ID: 160-3435-10

Date Collected: 08/16/13 15:55

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.20		0.167	0.203		0.0852	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Americium 241	0.0359	U	0.0595	0.0596		0.0993	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Bismuth 212	1.33		0.379	0.400		0.303	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Bismuth 214	0.743		0.105	0.127		0.0736	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Lead 212	1.12		0.0858	0.148		0.0693	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Lead 214	0.897		0.0920	0.127		0.0853	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Potassium 40	20.0		1.41	2.39		0.182	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Protactinium 231	0.543	U	0.255	0.261		1.14	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Radium 226	0.743		0.105	0.127	1.00	0.0736	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Thorium 234	1.36		0.731	0.743	1.00	0.925	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Uranium 235	0.100	U	0.129	0.130		0.236	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Protactinium 234m	3.58	U	3.52	3.54		6.46	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Thorium 232	1.20		0.167	0.203		0.0852	pCi/g	08/23/13 09:35	08/23/13 17:30	1
Other Detected										
Radionuclides	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Tl-208	0.349		0.0569	0.0663		0.0451	pCi/g	08/23/13 09:35	08/23/13 17:30	1

Client Sample ID: L050249PRS00

Lab Sample ID: 160-3435-11

Date Collected: 08/16/13 14:15

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☼	08/22/13 08:34	08/23/13 18:43	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.0977	U	0.110	0.119	1.32	0.226	pCi/g	08/22/13 08:34	08/23/13 18:43	1
Carrier										
	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	92		30 - 110					08/22/13 08:34	08/23/13 18:43	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.14		0.134	0.174		0.104	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Americium 241	-0.0433	U	0.0656	0.0657		0.109	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Bismuth 212	1.37		0.423	0.444		0.398	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Bismuth 214	0.885		0.102	0.133		0.0617	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Lead 212	1.07		0.0793	0.140		0.0648	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Lead 214	0.969		0.100	0.137		0.0732	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Potassium 40	20.0		1.28	2.32		0.289	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Protactinium 231	0.314	U	0.181	0.183		1.24	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Radium 226	0.885		0.102	0.133	1.00	0.0617	pCi/g	08/23/13 09:35	08/25/13 20:56	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050249PRS00

Lab Sample ID: 160-3435-11

Date Collected: 08/16/13 14:15

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	1.32		0.574	0.588	1.00	0.800	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Uranium 235	0.124	U	0.158	0.158		0.251	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Protactinium 234m	1.72	U	3.62	3.63		5.21	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Thorium 232	1.14		0.134	0.174		0.104	pCi/g	08/23/13 09:35	08/25/13 20:56	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.310		0.0516	0.0598		0.0414	pCi/g	08/23/13 09:35	08/25/13 20:56	1

Client Sample ID: L050250PES00

Lab Sample ID: 160-3435-12

Date Collected: 08/16/13 14:25

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☆	08/22/13 08:34	08/23/13 18:46	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	0.0562	U	0.0525	0.0577	1.32	0.226	pCi/g	08/22/13 08:34	08/23/13 18:46	1
Carrier										
Re	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
	91		30 - 110					08/22/13 08:34	08/23/13 18:46	1

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	1.15		0.135	0.179		0.107	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Americium 241	0.00416	U	0.0689	0.0689		0.116	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Bismuth 212	1.22		0.419	0.438		0.425	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Bismuth 214	0.940		0.107	0.145		0.0739	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Lead 212	1.15		0.0787	0.168		0.0638	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Lead 214	1.00		0.0902	0.138		0.0770	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Potassium 40	21.2		1.25	2.51		0.325	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Protactinium 231	0.434	U	0.255	0.259		1.14	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Radium 226	0.940		0.107	0.145	1.00	0.0739	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Thorium 234	1.05		0.312	0.331	1.00	0.807	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Uranium 235	0.113	U	0.146	0.146		0.251	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Protactinium 234m	2.62	U	3.24	3.25		5.33	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Thorium 232	1.15		0.135	0.179		0.107	pCi/g	08/23/13 09:35	08/25/13 21:32	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.370		0.0483	0.0617		0.0356	pCi/g	08/23/13 09:35	08/25/13 21:32	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050251PRS00

Lab Sample ID: 160-3435-13

Date Collected: 08/19/13 08:35

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00067	0.000020	mg/Kg	☆	08/22/13 08:34	08/23/13 18:50	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	0.0536	U	0.0671	0.0761	1.33	0.228	pCi/g	08/22/13 08:34	08/23/13 18:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	88		30 - 110					08/22/13 08:34	08/23/13 18:50	1

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	1.26		0.174	0.212		0.132	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Americium 241	0.00396	U	0.0704	0.0704		0.119	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 212	1.56		0.523	0.545		0.438	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 214	1.17		0.119	0.165		0.0747	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 212	1.11		0.0885	0.148		0.0901	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 214	1.24		0.107	0.161		0.0922	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Potassium 40	25.3		1.45	2.83		0.386	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 231	0.379	U	0.314	0.316		1.33	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Radium 226	1.17		0.119	0.165	1.00	0.0747	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 234	0.751	U	0.348	0.356	1.00	0.973	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Uranium 235	0.102	U	0.153	0.154		0.286	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 234m	3.14	U	2.81	2.82		6.47	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 232	1.26		0.174	0.212		0.132	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	08/23/13 09:35	08/25/13 21:33	1

Client Sample ID: L050252PES00

Lab Sample ID: 160-3435-14

Date Collected: 08/19/13 10:15

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00067	0.000020	mg/Kg	☆	08/22/13 08:34	08/23/13 18:54	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	0.0721	U	0.0500	0.0559	1.34	0.229	pCi/g	08/22/13 08:34	08/23/13 18:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 18:54	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050252PES00

Lab Sample ID: 160-3435-14

Date Collected: 08/19/13 10:15

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.17		0.161	0.197		0.127	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Americium 241	-0.000438	U	0.0752	0.0752		0.115	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 212	0.661		0.409	0.414		0.610	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 214	1.05		0.139	0.173		0.0948	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 212	1.23		0.0976	0.165		0.0878	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 214	1.20		0.108	0.159		0.112	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Potassium 40	24.1		1.61	2.84		0.199	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 231	0.675	U	0.322	0.329		1.43	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Radium 226	1.05		0.139	0.173	1.00	0.0948	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 234	0.985		0.370	0.383	1.00	0.973	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Uranium 235	0.0654	U	0.176	0.176		0.293	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 234m	1.06	U	3.96	3.96		6.96	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 232	1.17		0.161	0.197		0.127	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Other Detected										
Radionuclides										
Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Tl-208	0.422		0.0756	0.0861		0.0603	pCi/g	08/23/13 09:35	08/25/13 21:33	1

Client Sample ID: L050253PES00

Lab Sample ID: 160-3435-15

Date Collected: 08/19/13 08:45

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 81.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00067	0.000020	mg/Kg	☆	08/22/13 08:34	08/23/13 18:58	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.0497	U	0.00761	0.00972	1.33	0.228	pCi/g	08/22/13 08:34	08/23/13 18:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	91		30 - 110					08/22/13 08:34	08/23/13 18:58	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.44		0.299	0.333		0.268	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Americium 241	-0.0513	U	0.586	0.586		0.287	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Bismuth 212	0.540	U	0.844	0.846		1.42	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Bismuth 214	0.790		0.238	0.252		0.215	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Lead 212	1.28		0.185	0.248		0.149	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Lead 214	1.10		0.228	0.255		0.200	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Potassium 40	20.5		2.69	3.41		0.653	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Protactinium 231	0.453	U	0.425	0.428		3.36	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Radium 226	0.790		0.238	0.252	1.00	0.215	pCi/g	08/23/13 09:35	08/23/13 16:12	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050253PES00

Lab Sample ID: 160-3435-15

Date Collected: 08/19/13 08:45

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	0.782	U	0.649	0.654	1.00	2.70	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Uranium 235	0.177	U	0.289	0.289		0.574	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Protactinium 234m	-0.472	U	1.66	1.66		14.0	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Thorium 232	1.44		0.299	0.333		0.268	pCi/g	08/23/13 09:35	08/23/13 16:12	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.459		0.104	0.114		0.0581	pCi/g	08/23/13 09:35	08/23/13 16:12	1

Client Sample ID: L050254PES00

Lab Sample ID: 160-3435-16

Date Collected: 08/19/13 08:40

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☼	08/22/13 08:34	08/23/13 19:02	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	0.0347	U	0.0474	0.0526	1.32	0.227	pCi/g	08/22/13 08:34	08/23/13 19:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 19:02	1

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	1.19		0.198	0.229		0.144	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Americium 241	0.0131	U	0.0805	0.0805		0.136	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Bismuth 212	0.670	U	0.512	0.516		0.794	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Bismuth 214	1.07		0.153	0.185		0.111	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Lead 212	1.43		0.109	0.189		0.0810	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Lead 214	1.23		0.140	0.184		0.117	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Potassium 40	21.7		1.78	2.75		0.484	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Protactinium 231	0.807	U	0.429	0.436		1.89	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Radium 226	1.07		0.153	0.185	1.00	0.111	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Thorium 234	1.70		0.957	0.971	1.00	1.19	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Uranium 235	0.153	U	0.186	0.186		0.340	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Protactinium 234m	0.000	U	2.44	2.44		8.70	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Thorium 232	1.19		0.198	0.229		0.144	pCi/g	08/23/13 09:35	08/25/13 21:34	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.461		0.0712	0.0841		0.0526	pCi/g	08/23/13 09:35	08/25/13 21:34	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050255PES00

Lab Sample ID: 160-3435-17

Date Collected: 08/16/13 13:50

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00065	0.000020	mg/Kg	☼	08/22/13 08:34	08/23/13 19:06	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	0.0444	U	0.00855	0.0102	1.30	0.223	pCi/g	08/22/13 08:34	08/23/13 19:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	93		30 - 110					08/22/13 08:34	08/23/13 19:06	1

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	1.38		0.182	0.226		0.165	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Americium 241	0.0141	U	0.0547	0.0547		0.0948	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 212	1.34		0.484	0.501		0.462	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Bismuth 214	1.08		0.129	0.166		0.0875	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 212	1.27		0.0910	0.164		0.0784	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Lead 214	1.19		0.107	0.157		0.0906	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Potassium 40	24.7		1.50	2.82		0.311	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 231	-0.686	U	0.880	0.882		1.45	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Radium 226	1.08		0.129	0.166	1.00	0.0875	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 234	1.05		0.726	0.733	1.00	0.987	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Uranium 235	0.115	U	0.192	0.192		0.320	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Protactinium 234m	2.51	U	3.26	3.27		5.71	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Thorium 232	1.38		0.182	0.226		0.165	pCi/g	08/23/13 09:35	08/25/13 21:33	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.450		0.0575	0.0722		0.0412	pCi/g	08/23/13 09:35	08/25/13 21:33	1

Client Sample ID: L050256PRS00

Lab Sample ID: 160-3435-18

Date Collected: 08/19/13 08:55

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 84.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☼	08/22/13 08:34	08/23/13 19:10	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	0.0312	U	0.0367	0.0411	1.32	0.226	pCi/g	08/22/13 08:34	08/23/13 19:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:34	08/23/13 19:10	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050256PRS00

Lab Sample ID: 160-3435-18

Date Collected: 08/19/13 08:55

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.38		0.150	0.202		0.133	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Americium 241	-0.00474	U	0.0677	0.0677		0.114	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Bismuth 212	1.83		0.771	0.792		0.651	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Bismuth 214	1.12		0.126	0.167		0.0868	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Lead 212	1.27		0.0889	0.212		0.0710	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Lead 214	1.27		0.107	0.175		0.0863	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Potassium 40	24.5		1.46	2.77		0.381	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Protactinium 231	0.574	U	0.352	0.359		1.29	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Radium 226	1.12		0.126	0.167	1.00	0.0868	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Thorium 234	1.39		0.783	0.794	1.00	0.975	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Uranium 235	0.155	U	0.156	0.156		0.222	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Protactinium 234m	2.29	U	3.57	3.57		5.98	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Thorium 232	1.38		0.150	0.202		0.133	pCi/g	08/23/13 09:35	08/25/13 22:09	1
Other Detected			Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radionuclides			Uncert.	Uncert.						
	Result	Qualifier	(2σ+/-)	(2σ+/-)						
Tl-208	0.373		0.0598	0.0699		0.0461	pCi/g	08/23/13 09:35	08/25/13 22:09	1

Client Sample ID: L050257PES00

Lab Sample ID: 160-3435-19

Date Collected: 08/19/13 10:20

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00069	0.000021	mg/Kg	☆	08/22/13 08:34	08/23/13 19:21	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.117	U	0.0575	0.0672	1.39	0.238	pCi/g	08/22/13 08:34	08/23/13 19:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	87		30 - 110					08/22/13 08:34	08/23/13 19:21	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.31		0.170	0.212		0.137	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Americium 241	0.0207	U	0.0671	0.0671		0.112	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Bismuth 212	1.25		0.447	0.463		0.434	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Bismuth 214	1.13		0.125	0.166		0.0842	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Lead 212	1.19		0.0951	0.159		0.102	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Lead 214	1.13		0.112	0.157		0.0908	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Potassium 40	26.0		1.50	2.92		0.458	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Protactinium 231	0.401	U	0.293	0.295		1.36	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Radium 226	1.13		0.125	0.166	1.00	0.0842	pCi/g	08/23/13 09:35	08/25/13 22:11	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050257PES00

Lab Sample ID: 160-3435-19

Date Collected: 08/19/13 10:20

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	1.35		0.810	0.821	1.00	0.986	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Uranium 235	0.220	U	0.188	0.189		0.233	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Protactinium 234m	0.696	U	2.31	2.31		6.10	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Thorium 232	1.31		0.170	0.212		0.137	pCi/g	08/23/13 09:35	08/25/13 22:11	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	08/23/13 09:35	08/25/13 22:11	1

Client Sample ID: L050258PES00

Lab Sample ID: 160-3435-20

Date Collected: 08/16/13 13:40

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00068	0.000021	mg/Kg	☼	08/22/13 08:34	08/23/13 19:25	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	0.0872	U	0.101	0.114	1.37	0.234	pCi/g	08/22/13 08:34	08/23/13 19:25	1
Carrier										
Re	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
	89		30 - 110					08/22/13 08:34	08/23/13 19:25	1

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		0.143	0.180		0.152	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Americium 241	-0.00766	U	0.306	0.306		0.109	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Bismuth 212	1.21		0.403	0.420		0.389	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Bismuth 214	0.962		0.119	0.152		0.0779	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Lead 212	1.26		0.0930	0.165		0.0712	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Lead 214	1.12		0.121	0.163		0.0902	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Potassium 40	22.1		1.53	2.62		0.195	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Protactinium 231	-0.908	U	0.960	0.964		1.57	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Radium 226	0.962		0.119	0.152	1.00	0.0779	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Thorium 234	0.979		0.371	0.383	1.00	0.974	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Uranium 235	0.115	U	0.154	0.155		0.288	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Protactinium 234m	3.04	U	4.21	4.22		7.00	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Thorium 232	1.12		0.143	0.180		0.152	pCi/g	08/23/13 09:35	08/25/13 22:10	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.406		0.0604	0.0721		0.0435	pCi/g	08/23/13 09:35	08/25/13 22:10	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050259PRQ00

Lab Sample ID: 160-3435-21

Date Collected: 08/19/13 15:20

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00067	0.000020	mg/Kg	☼	08/22/13 08:38	08/23/13 19:37	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	0.112	U	0.0950	0.104	1.34	0.229	pCi/g	08/22/13 08:38	08/23/13 19:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	92		30 - 110					08/22/13 08:38	08/23/13 19:37	1

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	1.22		0.240	0.270		0.233	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Americium 241	-0.00450	U	0.129	0.129		0.223	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Bismuth 212	1.94		0.881	0.904		0.811	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Bismuth 214	0.897		0.184	0.206		0.159	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Lead 212	1.29		0.167	0.235		0.149	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Lead 214	0.842		0.188	0.208		0.189	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Potassium 40	18.3		1.97	2.72		1.06	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Protactinium 231	0.306	U	0.727	0.728		2.49	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Radium 226	0.897		0.184	0.206	1.00	0.159	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Thorium 234	1.72	U	1.68	1.69	1.00	2.31	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Uranium 235	0.228	U	0.251	0.252		0.460	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Protactinium 234m	4.76	U	6.91	6.92		11.5	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Thorium 232	1.22		0.240	0.270		0.233	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.417		0.0978	0.107		0.0862	pCi/g	08/23/13 11:49	08/23/13 16:14	1

Client Sample ID: L050259PRS00

Lab Sample ID: 160-3435-22

Date Collected: 08/16/13 15:20

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00072	0.000022	mg/Kg	☼	08/22/13 08:38	08/23/13 19:48	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	0.0960	U	0.0252	0.0305	1.43	0.245	pCi/g	08/22/13 08:38	08/23/13 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	87		30 - 110					08/22/13 08:38	08/23/13 19:48	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050259PRS00

Lab Sample ID: 160-3435-22

Date Collected: 08/16/13 15:20

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.17		0.294	0.317		0.175	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Americium 241	0.0945	U	0.138	0.138		0.229	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Bismuth 212	0.456	U	0.717	0.719		1.21	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Bismuth 214	0.735		0.205	0.218		0.200	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Lead 212	1.14		0.151	0.211		0.134	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Lead 214	0.958		0.189	0.214		0.164	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Potassium 40	20.0		2.21	3.01		0.847	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Protactinium 231	0.311	U	0.544	0.545		2.70	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Radium 226	0.735		0.205	0.218	1.00	0.200	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Thorium 234	1.91	U	1.37	1.38	1.00	2.24	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Uranium 235	0.256	U	0.266	0.267		0.523	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Protactinium 234m	3.58	U	7.07	7.08		12.2	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Thorium 232	1.17		0.294	0.317		0.175	pCi/g	08/23/13 11:49	08/23/13 16:14	1
Other Detected										
Radionuclides	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Tl-208	0.399		0.101	0.110		0.0921	pCi/g	08/23/13 11:49	08/23/13 16:14	1

Client Sample ID: L050260PES00

Lab Sample ID: 160-3435-23

Date Collected: 08/16/13 15:30

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00069	0.000021	mg/Kg	☆	08/22/13 08:38	08/23/13 19:52	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.0332	U	0.0265	0.0297	1.37	0.235	pCi/g	08/22/13 08:38	08/23/13 19:52	1
Carrier										
	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:38	08/23/13 19:52	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.33		0.146	0.195		0.121	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Americium 241	-0.0194	U	0.144	0.144		0.113	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Bismuth 212	1.56		0.531	0.552		0.475	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Bismuth 214	0.971		0.134	0.164		0.100	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Lead 212	1.24		0.0890	0.160		0.0682	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Lead 214	1.13		0.106	0.152		0.0931	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Potassium 40	22.3		1.49	2.62		0.182	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Protactinium 231	0.492	U	0.248	0.253		1.19	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Radium 226	0.971		0.134	0.164	1.00	0.100	pCi/g	08/23/13 11:49	08/25/13 20:14	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050260PES00

Lab Sample ID: 160-3435-23

Date Collected: 08/16/13 15:30

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	1.32		0.586	0.600	1.00	0.833	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Uranium 235	0.101	U	0.167	0.168		0.276	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Protactinium 234m	1.49	U	4.44	4.44		7.40	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Thorium 232	1.33		0.146	0.195		0.121	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.376		0.0603	0.0705		0.0498	pCi/g	08/23/13 11:49	08/25/13 20:14	1

Client Sample ID: L050261PRS00

Lab Sample ID: 160-3435-24

Date Collected: 08/16/13 09:05

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00069	0.000021	mg/Kg	☼	08/22/13 08:38	08/23/13 19:56	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	0.0503	U	0.0147	0.0174	1.38	0.236	pCi/g	08/22/13 08:38	08/23/13 19:56	1
Carrier										
Re	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	88		30 - 110					08/22/13 08:38	08/23/13 19:56	1

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	1.23		0.188	0.226		0.129	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Americium 241	0.0110	U	0.0785	0.0785		0.132	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Bismuth 212	1.89		0.522	0.558		0.405	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Bismuth 214	0.900		0.130	0.160		0.0969	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Lead 212	1.16		0.0941	0.177		0.0800	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Lead 214	1.16		0.119	0.169		0.0901	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Potassium 40	23.5		1.64	2.91		0.211	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Protactinium 231	-0.689	U	0.948	0.951		1.57	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Radium 226	0.900		0.130	0.160	1.00	0.0969	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Thorium 234	1.60		0.952	0.967	1.00	1.16	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Uranium 235	0.192	U	0.209	0.210		0.300	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Protactinium 234m	1.09	U	4.04	4.04		7.12	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Thorium 232	1.23		0.188	0.226		0.129	pCi/g	08/23/13 11:49	08/25/13 20:16	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.339		0.0570	0.0670		0.0450	pCi/g	08/23/13 11:49	08/25/13 20:16	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050262PES00

Lab Sample ID: 160-3435-25

Date Collected: 08/19/13 10:30

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00070	0.000021	mg/Kg	☼	08/22/13 08:38	08/23/13 20:08	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	0.127	U	0.0628	0.0715	1.39	0.238	pCi/g	08/22/13 08:38	08/23/13 20:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	89		30 - 110					08/22/13 08:38	08/23/13 20:08	1

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	1.24		0.137	0.182		0.123	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Americium 241	-0.000130	U	0.0590	0.0590		0.100	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Bismuth 212	1.79		0.572	0.598		0.523	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Bismuth 214	1.02		0.112	0.150		0.0779	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Lead 212	1.37		0.0905	0.173		0.0702	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Lead 214	1.10		0.0935	0.142		0.0739	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Potassium 40	24.0		1.45	2.72		0.386	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Protactinium 231	0.350	U	0.216	0.219		1.31	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Radium 226	1.02		0.112	0.150	1.00	0.0779	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Thorium 234	1.88		0.769	0.790	1.00	0.943	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Uranium 235	0.176	U	0.153	0.154		0.257	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Protactinium 234m	0.899	U	3.21	3.21		5.64	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Thorium 232	1.24		0.137	0.182		0.123	pCi/g	08/23/13 11:49	08/25/13 20:17	1
Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.378		0.0566	0.0675		0.0420	pCi/g	08/23/13 11:49	08/25/13 20:17	1

Client Sample ID: L050263PES00

Lab Sample ID: 160-3435-26

Date Collected: 08/19/13 13:30

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00069	0.000021	mg/Kg	☼	08/22/13 08:38	08/23/13 20:12	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	0.132	U	0.0336	0.0405	1.39	0.237	pCi/g	08/22/13 08:38	08/23/13 20:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	88		30 - 110					08/22/13 08:38	08/23/13 20:12	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050263PES00

Lab Sample ID: 160-3435-26

Date Collected: 08/19/13 13:30

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.14		0.123	0.169		0.138	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Americium 241	0.0112	U	0.0626	0.0626		0.105	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Bismuth 212	1.74		0.454	0.488		0.373	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Bismuth 214	1.10		0.107	0.157		0.0656	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Lead 212	1.28		0.0824	0.186		0.0634	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Lead 214	1.37		0.103	0.176		0.0814	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Potassium 40	24.5		1.35	2.85		0.263	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Protactinium 231	-0.614	U	0.844	0.847		1.40	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Radium 226	1.10		0.107	0.157	1.00	0.0656	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Thorium 234	1.03		0.332	0.349	1.00	1.02	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Uranium 235	0.142	U	0.115	0.115		0.184	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Protactinium 234m	0.000	U	3.18	3.18		7.82	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Thorium 232	1.14		0.123	0.169		0.138	pCi/g	08/23/13 11:49	08/28/13 11:05	1
Other Detected										
Radionuclides	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Tl-208	0.425		0.0535	0.0693		0.0387	pCi/g	08/23/13 11:49	08/28/13 11:05	1

Client Sample ID: L050264PRS00

Lab Sample ID: 160-3435-27

Date Collected: 08/16/13 14:50

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00069	0.000021	mg/Kg	☆	08/22/13 08:38	08/23/13 20:16	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Technetium 99	0.173	U	0.112	0.125	1.37	0.235	pCi/g	08/22/13 08:38	08/23/13 20:16	1
Carrier										
	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	90		30 - 110					08/22/13 08:38	08/23/13 20:16	1

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Actinium 228	1.85		0.329	0.379		0.244	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Americium 241	-0.0185	U	0.238	0.238		0.412	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Bismuth 212	1.18	U	1.26	1.27		2.01	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Bismuth 214	0.711		0.229	0.241		0.163	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Lead 212	1.35		0.257	0.311		0.231	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Lead 214	1.14		0.246	0.273		0.170	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Potassium 40	18.8		3.21	3.74		1.31	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Protactinium 231	0.477	U	0.633	0.636		4.15	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Radium 226	0.711		0.229	0.241	1.00	0.163	pCi/g	08/23/13 11:49	08/23/13 16:15	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050264PRS00

Lab Sample ID: 160-3435-27

Date Collected: 08/16/13 14:50

Matrix: Solid

Date Received: 08/20/13 16:06

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
Thorium 234	1.16	U	1.04	1.05	1.00	3.03	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Uranium 235	0.284	U	0.475	0.476		0.809	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Protactinium 234m	1.57	U	9.26	9.26		25.1	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Thorium 232	1.85		0.329	0.379		0.244	pCi/g	08/23/13 11:49	08/23/13 16:15	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.564		0.147	0.159		0.0907	pCi/g	08/23/13 11:49	08/23/13 16:15	1

Client Sample ID: L050265PES00

Lab Sample ID: 160-3435-28

Date Collected: 08/16/13 15:00

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 80.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00070	0.000021	mg/Kg	☼	08/22/13 08:38	08/23/13 20:19	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	0.217	U	0.0725	0.0850	1.40	0.240	pCi/g	08/22/13 08:38	08/23/13 20:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	89		30 - 110					08/22/13 08:38	08/23/13 20:19	1

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	1.45		0.145	0.202		0.128	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Americium 241	0.0270	U	0.0702	0.0703		0.117	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Bismuth 212	1.41		0.471	0.491		0.459	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Bismuth 214	1.05		0.116	0.155		0.0768	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Lead 212	1.34		0.0913	0.222		0.0705	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Lead 214	1.17		0.112	0.170		0.0982	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Potassium 40	20.7		1.37	2.42		0.450	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Protactinium 231	0.953	U	0.404	0.420		1.18	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Radium 226	1.05		0.116	0.155	1.00	0.0768	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Thorium 234	1.33		0.901	0.911	1.00	1.08	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Uranium 235	0.301		0.196	0.198		0.229	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Protactinium 234m	0.619	U	3.88	3.88		6.83	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Thorium 232	1.45		0.145	0.202		0.128	pCi/g	08/23/13 11:49	08/25/13 20:53	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.443		0.0667	0.0794		0.0513	pCi/g	08/23/13 11:49	08/25/13 20:53	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050266PUB00

Lab Sample ID: 160-3435-29

Date Collected: 08/16/13 11:50

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 85.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00064	0.000019	mg/Kg	☼	08/22/13 08:38	08/23/13 20:23	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	0.0513	U	0.0558	0.0611	1.28	0.219	pCi/g	08/22/13 08:38	08/23/13 20:23	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Re	92		30 - 110	08/22/13 08:38	08/23/13 20:23	1

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	1.01		0.128	0.165		0.116	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Americium 241	-0.00396	U	0.0632	0.0632		0.107	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Bismuth 212	1.28		0.486	0.504		0.445	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Bismuth 214	0.840		0.107	0.138		0.0823	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Lead 212	0.925		0.0801	0.144		0.0898	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Lead 214	1.06		0.0960	0.146		0.0667	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Potassium 40	22.4		1.28	2.62		0.381	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Protactinium 231	-0.676	U	0.745	0.749		1.22	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Radium 226	0.840		0.107	0.138	1.00	0.0823	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Thorium 234	1.49		0.719	0.735	1.00	0.905	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Uranium 235	0.0295	U	0.150	0.150		0.264	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Protactinium 234m	0.000	U	2.27	2.27		5.98	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Thorium 232	1.01		0.128	0.165		0.116	pCi/g	08/23/13 11:49	08/25/13 20:55	1

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.347		0.0425	0.0557		0.0304	pCi/g	08/23/13 11:49	08/25/13 20:55	1

Client Sample ID: L050267PUB00

Lab Sample ID: 160-3435-30

Date Collected: 08/16/13 11:55

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☼	08/22/13 08:38	08/23/13 20:27	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	0.0320	U	0.0105	0.0123	1.32	0.226	pCi/g	08/22/13 08:38	08/23/13 20:27	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Re	89		30 - 110	08/22/13 08:38	08/23/13 20:27	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050267PUB00

Lab Sample ID: 160-3435-30

Date Collected: 08/16/13 11:55

Matrix: Solid

Date Received: 08/20/13 16:06

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	1.13		0.147	0.183		0.163	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Americium 241	0.0341	U	0.0527	0.0528		0.0793	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Bismuth 212	1.21		0.408	0.425		0.379	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Bismuth 214	0.916		0.115	0.145		0.0770	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Lead 212	1.13		0.0875	0.150		0.0730	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Lead 214	1.08		0.0937	0.140		0.0811	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Potassium 40	22.5		1.50	2.64		0.183	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Protactinium 231	0.802	U	0.325	0.335		1.47	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Radium 226	0.916		0.115	0.145	1.00	0.0770	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Thorium 234	1.29		0.674	0.686	1.00	0.918	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Uranium 235	0.116	U	0.159	0.159		0.248	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Protactinium 234m	-0.269	U	3.93	3.93		7.03	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Thorium 232	1.13		0.147	0.183		0.163	pCi/g	08/23/13 11:49	08/25/13 20:54	1
Other Detected										
Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.337		0.0525	0.0618		0.0402	pCi/g	08/23/13 11:49	08/25/13 20:54	1

Client Sample ID: L050268PUB00

Lab Sample ID: 160-3435-31

Date Collected: 08/16/13 12:00

Matrix: Solid

Date Received: 08/20/13 16:06

Percent Solids: 93.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00057	0.000017	mg/Kg	☆	08/22/13 08:38	08/23/13 20:31	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	0.231		0.0427	0.0502	1.13	0.194	pCi/g	08/22/13 08:38	08/23/13 20:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	95		30 - 110					08/22/13 08:38	08/23/13 20:31	1

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	0.207		0.0648	0.0681		0.109	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Americium 241	-0.00170	U	0.0417	0.0417		0.0711	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Bismuth 212	0.130	U	0.201	0.201		0.338	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Bismuth 214	0.417		0.0684	0.0810		0.0449	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Lead 212	0.269		0.0394	0.0525		0.0391	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Lead 214	0.532		0.0618	0.0829		0.0551	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Potassium 40	5.35		0.688	0.879		0.259	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Protactinium 231	-0.0624	U	0.381	0.381		0.669	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Radium 226	0.417		0.0684	0.0810	1.00	0.0449	pCi/g	08/23/13 11:49	08/25/13 20:55	1

TestAmerica St. Louis

Client Sample Results

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

TestAmerica Job ID: 160-3435-1

Client Sample ID: L050268PUB00

Lab Sample ID: 160-3435-31

Date Collected: 08/16/13 12:00

Matrix: Solid

Date Received: 08/20/13 16:06

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

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Thorium 234	0.690		0.246	0.256	1.00	0.649	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Uranium 235	0.200		0.103	0.105		0.189	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Protactinium 234m	1.99	U	2.58	2.58		4.25	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Thorium 232	0.207		0.0648	0.0681		0.109	pCi/g	08/23/13 11:49	08/25/13 20:55	1
Other Detected										
			Count	Total						
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radionuclides	Result	Qualifier			RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tl-208	0.0918		0.0261	0.0278		0.0234	pCi/g	08/23/13 11:49	08/25/13 20:55	1

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: MB 160-67949/1-A

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 67949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00052	0.000015	mg/Kg		08/22/13 08:34	08/23/13 17:33	1

Lab Sample ID: LCS 160-67949/2-A

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 67949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	0.00250	0.00254		mg/Kg		102	80 - 120

Lab Sample ID: 160-3435-1 MS

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: L050190TUB00

Prep Type: Total/NA

Prep Batch: 67949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	ND		0.00335	0.00311		mg/Kg	☼	93	75 - 125

Lab Sample ID: 160-3435-1 MSD

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: L050190TUB00

Prep Type: Total/NA

Prep Batch: 67949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Technetium 99	ND		0.00333	0.00294		mg/Kg	☼	88	75 - 125	6	30

Lab Sample ID: MB 160-67951/1-A

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 67951

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00053	0.000016	mg/Kg		08/22/13 08:38	08/23/13 19:29	1

Lab Sample ID: LCS 160-67951/2-A

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 67951

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	0.00247	0.00245		mg/Kg		99	80 - 120

Lab Sample ID: 160-3435-21 MS

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: L050259PRQ00

Prep Type: Total/NA

Prep Batch: 67951

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Technetium 99	ND		0.00321	0.00304		mg/Kg	☼	95	75 - 125

Lab Sample ID: 160-3435-21 MSD

Matrix: Solid

Analysis Batch: 68435

Client Sample ID: L050259PRQ00

Prep Type: Total/NA

Prep Batch: 67951

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Technetium 99	ND		0.00320	0.00298		mg/Kg	☼	93	75 - 125	2	30

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: MB 160-67949/1-A

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 67949

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	0.04102	U	0.00769	0.00886	1.03	0.177	pCi/g	08/22/13 08:34	08/23/13 17:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Re	97		30 - 110					08/22/13 08:34	08/23/13 17:33	1

Lab Sample ID: LCS 160-67949/2-A

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 67949

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99		42.8	43.57		4.81	1.07	0.183	pCi/g	102	80 - 120
Carrier	LCS %Yield	LCS Qualifier	Limits							
Re	94		30 - 110							

Lab Sample ID: 160-3435-1 MS

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: L050190TUB00

Prep Type: Total/NA

Prep Batch: 67949

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99	0.234	U	57.4	53.16		6.06	1.43	0.246	pCi/g	93	75 - 125
Carrier	MS %Yield	MS Qualifier	Limits								
Re	90		30 - 110								

Lab Sample ID: 160-3435-1 MSD

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: L050190TUB00

Prep Type: Total/NA

Prep Batch: 67949

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	0.234	U	57.0	50.25		6.16	1.43	0.244	pCi/g	88	75 - 125	0.24	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Re	90		30 - 110										

Lab Sample ID: MB 160-67951/1-A

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 67951

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	0.04180	U	0.0131	0.0144	1.06	0.181	pCi/g	08/22/13 08:38	08/23/13 19:29	1

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: MB 160-67951/1-A

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 67951

Carrier	MB %Yield	MB Qualifier	Limits
Re	94		30 - 110

Prepared	Analyzed	Dil Fac
08/22/13 08:38	08/23/13 19:29	1

Lab Sample ID: LCS 160-67951/2-A

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 67951

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99	42.3	41.92		4.13	1.06	0.181	pCi/g	99	80 - 120
Carrier	LCS %Yield	LCS Qualifier	Limits						
Re	95		30 - 110						

Lab Sample ID: 160-3435-21 MS

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: L050259PRQ00

Prep Type: Total/NA

Prep Batch: 67951

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Technetium 99	0.112	U	55.0	52.13		5.61	1.37	0.235	pCi/g	95	75 - 125
Carrier	MS %Yield	MS Qualifier	Limits								
Re	90		30 - 110								

Lab Sample ID: 160-3435-21 MSD

Matrix: Solid

Analysis Batch: 68436

Client Sample ID: L050259PRQ00

Prep Type: Total/NA

Prep Batch: 67951

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	0.112	U	54.8	50.99		5.39	1.37	0.235	pCi/g	93	75 - 125	0.10	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Re	90		30 - 110										

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

Lab Sample ID: MB 160-68149/1-A

Matrix: Solid

Analysis Batch: 68614

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 68149

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.004246	U	0.0201	0.0201		0.0322	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Americium 241	0.002703	U	0.0141	0.0141		0.0263	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Bismuth 212	0.0000	U	0.0276	0.0276		0.333	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Bismuth 214	0.02545	U	0.0173	0.0175		0.0289	pCi/g	08/23/13 09:35	08/26/13 21:04	1

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: MB 160-68149/1-A

Matrix: Solid

Analysis Batch: 68614

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 68149

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Lead 212	0.01369	U	0.0141	0.0142		0.0216	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Lead 214	0.005201	U	0.00666	0.00668		0.0413	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Potassium 40	0.03823	U	0.115	0.115		0.217	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Protactinium 231	-0.004419	U	0.195	0.195		0.367	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Radium 226	0.02545	U	0.0173	0.0175	1.00	0.0289	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Thorium 234	0.007326	U	0.0189	0.0189	1.00	0.299	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Uranium 235	0.03931	U	0.0382	0.0384		0.0733	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Protactinium 234m	-0.4858	U	1.68	1.68		3.05	pCi/g	08/23/13 09:35	08/26/13 21:04	1
Thorium 232	0.004246	U	0.0201	0.0201		0.0322	pCi/g	08/23/13 09:35	08/26/13 21:04	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	08/23/13 09:35	08/26/13 21:04	1

Lab Sample ID: LCS 160-68149/2-A

Matrix: Solid

Analysis Batch: 68409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 68149

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium 241	97.7	96.19		10.1		0.898	pCi/g	98	87 - 116
Cesium 137	31.7	31.81		3.34	0.200	0.178	pCi/g	100	87 - 120
Cobalt 60	24.8	24.77		2.51		0.109	pCi/g	100	87 - 115

Lab Sample ID: 160-3435-1 DU

Matrix: Solid

Analysis Batch: 68392

Client Sample ID: L050190TUB00

Prep Type: Total/NA

Prep Batch: 68149

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Actinium 228	0.932		0.9822		0.169		0.115	pCi/g	0.16	1
Americium 241	-0.0189	U	0.003815	U	0.0643		0.108	pCi/g	0.18	1
Bismuth 212	1.48		1.366		0.398		0.291	pCi/g	0.14	1
Bismuth 214	0.752		0.7715		0.122		0.0633	pCi/g	0.08	1
Lead 212	0.931		0.8332		0.131		0.0809	pCi/g	0.36	1
Lead 214	0.832		0.8105		0.118		0.0671	pCi/g	0.09	1
Potassium 40	16.7		17.17		2.06		0.227	pCi/g	0.12	1
Protactinium 231	0.518	U	-0.5099	U F	0.643		1.06	pCi/g	1.08	1
Radium 226	0.752		0.7715		0.122	1.00	0.0633	pCi/g	0.08	1
Thorium 234	1.08		1.867		0.742	1.00	0.833	pCi/g	0.59	1
Uranium 235	0.155	U	0.1289	U	0.124		0.167	pCi/g	0.1	1
Protactinium 234m	4.37	U	4.236	U	2.99		4.93	pCi/g	0.03	1
Thorium 232	0.932		0.9822		0.169		0.115	pCi/g	0.16	1

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: MB 160-68361/1-A

Matrix: Solid

Analysis Batch: 68418

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 68361

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.004165	U	0.00789	0.00790		0.0662	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Americium 241	0.003463	U	0.0147	0.0147		0.0257	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Bismuth 212	0.02943	U	0.0858	0.0859		0.158	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Bismuth 214	-0.001347	U	0.0223	0.0223		0.0401	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Lead 212	0.01034	U	0.0130	0.0131		0.0219	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Lead 214	0.03187		0.0168	0.0171		0.0285	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Potassium 40	-0.009079	U	0.158	0.158		0.315	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Protactinium 231	-0.02795	U	0.197	0.197		0.358	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Radium 226	-0.001347	U	0.0223	0.0223	1.00	0.0401	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Thorium 234	0.03659	U	0.144	0.144	1.00	0.278	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Uranium 235	0.004433	U	0.0348	0.0348		0.0627	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Protactinium 234m	0.8453	U	1.05	1.05		1.68	pCi/g	08/23/13 11:49	08/25/13 20:14	1
Thorium 232	0.004165	U	0.00789	0.00790		0.0662	pCi/g	08/23/13 11:49	08/25/13 20:14	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	08/23/13 11:49	08/25/13 20:14	1

Lab Sample ID: LCS 160-68361/2-A

Matrix: Solid

Analysis Batch: 68419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 68361

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium 241	97.7	94.58		9.84		0.491	pCi/g	97	87 - 116
Cesium 137	31.7	31.34		3.28	0.200	0.129	pCi/g	99	87 - 120
Cobalt 60	24.8	24.45		2.47		0.109	pCi/g	99	87 - 115

Lab Sample ID: 160-3435-31 DU

Matrix: Solid

Analysis Batch: 68414

Client Sample ID: L050268PUB00

Prep Type: Total/NA

Prep Batch: 68361

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Actinium 228	0.207		0.3328		0.0729		0.0386	pCi/g	0.89	1
Americium 241	-0.00170	U	-0.01717	U	0.0401		0.0671	pCi/g	0.19	1
Bismuth 212	0.130	U	0.3056		0.152		0.153	pCi/g	0.50	1
Bismuth 214	0.417		0.5197		0.0835		0.0401	pCi/g	0.62	1
Lead 212	0.269		0.3239		0.0557		0.0346	pCi/g	0.51	1
Lead 214	0.532		0.4982		0.0739		0.0395	pCi/g	0.22	1
Potassium 40	5.35		5.186		0.748		0.187	pCi/g	0.10	1
Protactinium 231	-0.0624	U	0.1583	U	0.121		0.560	pCi/g	0.44	1
Radium 226	0.417		0.5197		0.0835	1.00	0.0401	pCi/g	0.62	1
Thorium 234	0.690		1.292		0.501	1.00	0.576	pCi/g	0.80	1
Uranium 235	0.200		0.2728		0.0966		0.112	pCi/g	0.36	1
Protactinium 234m	1.99	U	0.9806	U	1.56		2.89	pCi/g	0.24	1

TestAmerica St. Louis

QC Sample Results

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

TestAmerica Job ID: 160-3435-1

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

Lab Sample ID: 160-3435-31 DU
Matrix: Solid
Analysis Batch: 68414

Client Sample ID: L050268PUB00
Prep Type: Total/NA
Prep Batch: 68361

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Thorium 232	0.207		0.3328		0.0729		0.0386	pCi/g	0.89	1

QC Association Summary

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

TestAmerica Job ID: 160-3435-1

Metals

Prep Batch: 67949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	None	
160-3435-1 MS	L050190TUB00	Total/NA	Solid	None	
160-3435-1 MSD	L050190TUB00	Total/NA	Solid	None	
160-3435-2	L050191TUB00	Total/NA	Solid	None	
160-3435-3	L050192TUB00	Total/NA	Solid	None	
160-3435-4	L050193TUB00	Total/NA	Solid	None	
160-3435-5	L050194TUB00	Total/NA	Solid	None	
160-3435-6	L050195TUB00	Total/NA	Solid	None	
160-3435-7	L050196TUB00	Total/NA	Solid	None	
160-3435-8	L050197TUB00	Total/NA	Solid	None	
160-3435-9	L050247PRS00	Total/NA	Solid	None	
160-3435-10	L050248PES00	Total/NA	Solid	None	
160-3435-11	L050249PRS00	Total/NA	Solid	None	
160-3435-12	L050250PES00	Total/NA	Solid	None	
160-3435-13	L050251PRS00	Total/NA	Solid	None	
160-3435-14	L050252PES00	Total/NA	Solid	None	
160-3435-15	L050253PES00	Total/NA	Solid	None	
160-3435-16	L050254PES00	Total/NA	Solid	None	
160-3435-17	L050255PES00	Total/NA	Solid	None	
160-3435-18	L050256PRS00	Total/NA	Solid	None	
160-3435-19	L050257PES00	Total/NA	Solid	None	
160-3435-20	L050258PES00	Total/NA	Solid	None	
LCS 160-67949/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-67949/1-A	Method Blank	Total/NA	Solid	None	

Prep Batch: 67951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-21	L050259PRQ00	Total/NA	Solid	None	
160-3435-21 MS	L050259PRQ00	Total/NA	Solid	None	
160-3435-21 MSD	L050259PRQ00	Total/NA	Solid	None	
160-3435-22	L050259PRS00	Total/NA	Solid	None	
160-3435-23	L050260PES00	Total/NA	Solid	None	
160-3435-24	L050261PRS00	Total/NA	Solid	None	
160-3435-25	L050262PES00	Total/NA	Solid	None	
160-3435-26	L050263PES00	Total/NA	Solid	None	
160-3435-27	L050264PRS00	Total/NA	Solid	None	
160-3435-28	L050265PES00	Total/NA	Solid	None	
160-3435-29	L050266PUB00	Total/NA	Solid	None	
160-3435-30	L050267PUB00	Total/NA	Solid	None	
160-3435-31	L050268PUB00	Total/NA	Solid	None	
LCS 160-67951/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-67951/1-A	Method Blank	Total/NA	Solid	None	

Analysis Batch: 68435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	6020A	67949
160-3435-1 MS	L050190TUB00	Total/NA	Solid	6020A	67949
160-3435-1 MSD	L050190TUB00	Total/NA	Solid	6020A	67949
160-3435-2	L050191TUB00	Total/NA	Solid	6020A	67949
160-3435-3	L050192TUB00	Total/NA	Solid	6020A	67949
160-3435-4	L050193TUB00	Total/NA	Solid	6020A	67949

TestAmerica St. Louis

QC Association Summary

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

TestAmerica Job ID: 160-3435-1

Metals (Continued)

Analysis Batch: 68435 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-5	L050194TUB00	Total/NA	Solid	6020A	67949
160-3435-6	L050195TUB00	Total/NA	Solid	6020A	67949
160-3435-7	L050196TUB00	Total/NA	Solid	6020A	67949
160-3435-8	L050197TUB00	Total/NA	Solid	6020A	67949
160-3435-9	L050247PRS00	Total/NA	Solid	6020A	67949
160-3435-10	L050248PES00	Total/NA	Solid	6020A	67949
160-3435-11	L050249PRS00	Total/NA	Solid	6020A	67949
160-3435-12	L050250PES00	Total/NA	Solid	6020A	67949
160-3435-13	L050251PRS00	Total/NA	Solid	6020A	67949
160-3435-14	L050252PES00	Total/NA	Solid	6020A	67949
160-3435-15	L050253PES00	Total/NA	Solid	6020A	67949
160-3435-16	L050254PES00	Total/NA	Solid	6020A	67949
160-3435-17	L050255PES00	Total/NA	Solid	6020A	67949
160-3435-18	L050256PRS00	Total/NA	Solid	6020A	67949
160-3435-19	L050257PES00	Total/NA	Solid	6020A	67949
160-3435-20	L050258PES00	Total/NA	Solid	6020A	67949
160-3435-21	L050259PRQ00	Total/NA	Solid	6020A	67951
160-3435-21 MS	L050259PRQ00	Total/NA	Solid	6020A	67951
160-3435-21 MSD	L050259PRQ00	Total/NA	Solid	6020A	67951
160-3435-22	L050259PRS00	Total/NA	Solid	6020A	67951
160-3435-23	L050260PES00	Total/NA	Solid	6020A	67951
160-3435-24	L050261PRS00	Total/NA	Solid	6020A	67951
160-3435-25	L050262PES00	Total/NA	Solid	6020A	67951
160-3435-26	L050263PES00	Total/NA	Solid	6020A	67951
160-3435-27	L050264PRS00	Total/NA	Solid	6020A	67951
160-3435-28	L050265PES00	Total/NA	Solid	6020A	67951
160-3435-29	L050266PUB00	Total/NA	Solid	6020A	67951
160-3435-30	L050267PUB00	Total/NA	Solid	6020A	67951
160-3435-31	L050268PUB00	Total/NA	Solid	6020A	67951
LCS 160-67949/2-A	Lab Control Sample	Total/NA	Solid	6020A	67949
LCS 160-67951/2-A	Lab Control Sample	Total/NA	Solid	6020A	67951
MB 160-67949/1-A	Method Blank	Total/NA	Solid	6020A	67949
MB 160-67951/1-A	Method Blank	Total/NA	Solid	6020A	67951

General Chemistry

Analysis Batch: 67942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	Moisture	
160-3435-2	L050191TUB00	Total/NA	Solid	Moisture	
160-3435-3	L050192TUB00	Total/NA	Solid	Moisture	
160-3435-4	L050193TUB00	Total/NA	Solid	Moisture	
160-3435-5	L050194TUB00	Total/NA	Solid	Moisture	
160-3435-6	L050195TUB00	Total/NA	Solid	Moisture	
160-3435-7	L050196TUB00	Total/NA	Solid	Moisture	
160-3435-8	L050197TUB00	Total/NA	Solid	Moisture	
160-3435-9	L050247PRS00	Total/NA	Solid	Moisture	
160-3435-10	L050248PES00	Total/NA	Solid	Moisture	
160-3435-11	L050249PRS00	Total/NA	Solid	Moisture	
160-3435-12	L050250PES00	Total/NA	Solid	Moisture	

TestAmerica St. Louis

QC Association Summary

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

TestAmerica Job ID: 160-3435-1

General Chemistry (Continued)

Analysis Batch: 67942 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-13	L050251PRS00	Total/NA	Solid	Moisture	
160-3435-14	L050252PES00	Total/NA	Solid	Moisture	
160-3435-15	L050253PES00	Total/NA	Solid	Moisture	
160-3435-16	L050254PES00	Total/NA	Solid	Moisture	
160-3435-17	L050255PES00	Total/NA	Solid	Moisture	
160-3435-18	L050256PRS00	Total/NA	Solid	Moisture	
160-3435-19	L050257PES00	Total/NA	Solid	Moisture	
160-3435-20	L050258PES00	Total/NA	Solid	Moisture	
160-3435-21	L050259PRQ00	Total/NA	Solid	Moisture	
160-3435-22	L050259PRS00	Total/NA	Solid	Moisture	
160-3435-23	L050260PES00	Total/NA	Solid	Moisture	
160-3435-24	L050261PRS00	Total/NA	Solid	Moisture	
160-3435-25	L050262PES00	Total/NA	Solid	Moisture	
160-3435-26	L050263PES00	Total/NA	Solid	Moisture	
160-3435-27	L050264PRS00	Total/NA	Solid	Moisture	
160-3435-28	L050265PES00	Total/NA	Solid	Moisture	
160-3435-29	L050266PUB00	Total/NA	Solid	Moisture	
160-3435-30	L050267PUB00	Total/NA	Solid	Moisture	
160-3435-31	L050268PUB00	Total/NA	Solid	Moisture	
160-3435-31 DU	L050268PUB00	Total/NA	Solid	Moisture	

Rad

Leach Batch: 67776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	Dry and Grind	
160-3435-1 DU	L050190TUB00	Total/NA	Solid	Dry and Grind	
160-3435-2	L050191TUB00	Total/NA	Solid	Dry and Grind	
160-3435-3	L050192TUB00	Total/NA	Solid	Dry and Grind	
160-3435-4	L050193TUB00	Total/NA	Solid	Dry and Grind	
160-3435-5	L050194TUB00	Total/NA	Solid	Dry and Grind	
160-3435-6	L050195TUB00	Total/NA	Solid	Dry and Grind	
160-3435-7	L050196TUB00	Total/NA	Solid	Dry and Grind	
160-3435-8	L050197TUB00	Total/NA	Solid	Dry and Grind	
160-3435-9	L050247PRS00	Total/NA	Solid	Dry and Grind	
160-3435-10	L050248PES00	Total/NA	Solid	Dry and Grind	
160-3435-11	L050249PRS00	Total/NA	Solid	Dry and Grind	
160-3435-12	L050250PES00	Total/NA	Solid	Dry and Grind	
160-3435-13	L050251PRS00	Total/NA	Solid	Dry and Grind	
160-3435-14	L050252PES00	Total/NA	Solid	Dry and Grind	
160-3435-15	L050253PES00	Total/NA	Solid	Dry and Grind	
160-3435-16	L050254PES00	Total/NA	Solid	Dry and Grind	
160-3435-17	L050255PES00	Total/NA	Solid	Dry and Grind	
160-3435-18	L050256PRS00	Total/NA	Solid	Dry and Grind	
160-3435-19	L050257PES00	Total/NA	Solid	Dry and Grind	
160-3435-20	L050258PES00	Total/NA	Solid	Dry and Grind	
160-3435-21	L050259PRQ00	Total/NA	Solid	Dry and Grind	
160-3435-22	L050259PRS00	Total/NA	Solid	Dry and Grind	
160-3435-23	L050260PES00	Total/NA	Solid	Dry and Grind	
160-3435-24	L050261PRS00	Total/NA	Solid	Dry and Grind	

TestAmerica St. Louis

QC Association Summary

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

TestAmerica Job ID: 160-3435-1

Rad (Continued)

Leach Batch: 67776 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-25	L050262PES00	Total/NA	Solid	Dry and Grind	
160-3435-26	L050263PES00	Total/NA	Solid	Dry and Grind	
160-3435-27	L050264PRS00	Total/NA	Solid	Dry and Grind	
160-3435-28	L050265PES00	Total/NA	Solid	Dry and Grind	
160-3435-29	L050266PUB00	Total/NA	Solid	Dry and Grind	
160-3435-30	L050267PUB00	Total/NA	Solid	Dry and Grind	
160-3435-31	L050268PUB00	Total/NA	Solid	Dry and Grind	
160-3435-31 DU	L050268PUB00	Total/NA	Solid	Dry and Grind	

Prep Batch: 67949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	None	
160-3435-1 MS	L050190TUB00	Total/NA	Solid	None	
160-3435-1 MSD	L050190TUB00	Total/NA	Solid	None	
160-3435-2	L050191TUB00	Total/NA	Solid	None	
160-3435-3	L050192TUB00	Total/NA	Solid	None	
160-3435-4	L050193TUB00	Total/NA	Solid	None	
160-3435-5	L050194TUB00	Total/NA	Solid	None	
160-3435-6	L050195TUB00	Total/NA	Solid	None	
160-3435-7	L050196TUB00	Total/NA	Solid	None	
160-3435-8	L050197TUB00	Total/NA	Solid	None	
160-3435-9	L050247PRS00	Total/NA	Solid	None	
160-3435-10	L050248PES00	Total/NA	Solid	None	
160-3435-11	L050249PRS00	Total/NA	Solid	None	
160-3435-12	L050250PES00	Total/NA	Solid	None	
160-3435-13	L050251PRS00	Total/NA	Solid	None	
160-3435-14	L050252PES00	Total/NA	Solid	None	
160-3435-15	L050253PES00	Total/NA	Solid	None	
160-3435-16	L050254PES00	Total/NA	Solid	None	
160-3435-17	L050255PES00	Total/NA	Solid	None	
160-3435-18	L050256PRS00	Total/NA	Solid	None	
160-3435-19	L050257PES00	Total/NA	Solid	None	
160-3435-20	L050258PES00	Total/NA	Solid	None	
LCS 160-67949/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-67949/1-A	Method Blank	Total/NA	Solid	None	

Prep Batch: 67951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-21	L050259PRQ00	Total/NA	Solid	None	
160-3435-21 MS	L050259PRQ00	Total/NA	Solid	None	
160-3435-21 MSD	L050259PRQ00	Total/NA	Solid	None	
160-3435-22	L050259PRS00	Total/NA	Solid	None	
160-3435-23	L050260PES00	Total/NA	Solid	None	
160-3435-24	L050261PRS00	Total/NA	Solid	None	
160-3435-25	L050262PES00	Total/NA	Solid	None	
160-3435-26	L050263PES00	Total/NA	Solid	None	
160-3435-27	L050264PRS00	Total/NA	Solid	None	
160-3435-28	L050265PES00	Total/NA	Solid	None	
160-3435-29	L050266PUB00	Total/NA	Solid	None	
160-3435-30	L050267PUB00	Total/NA	Solid	None	
160-3435-31	L050268PUB00	Total/NA	Solid	None	

TestAmerica St. Louis

QC Association Summary

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

TestAmerica Job ID: 160-3435-1

Rad (Continued)

Prep Batch: 67951 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-67951/2-A	Lab Control Sample	Total/NA	Solid	None	
MB 160-67951/1-A	Method Blank	Total/NA	Solid	None	

Prep Batch: 68149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-1	L050190TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-1 DU	L050190TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-2	L050191TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-3	L050192TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-4	L050193TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-5	L050194TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-6	L050195TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-7	L050196TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-8	L050197TUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-9	L050247PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-10	L050248PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-11	L050249PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-12	L050250PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-13	L050251PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-14	L050252PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-15	L050253PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-16	L050254PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-17	L050255PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-18	L050256PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-19	L050257PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-20	L050258PES00	Total/NA	Solid	Fill_Geo-0	67776
LCS 160-68149/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
MB 160-68149/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	

Prep Batch: 68361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3435-21	L050259PRQ00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-22	L050259PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-23	L050260PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-24	L050261PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-25	L050262PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-26	L050263PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-27	L050264PRS00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-28	L050265PES00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-29	L050266PUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-30	L050267PUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-31	L050268PUB00	Total/NA	Solid	Fill_Geo-0	67776
160-3435-31 DU	L050268PUB00	Total/NA	Solid	Fill_Geo-0	67776
LCS 160-68361/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-0	
MB 160-68361/1-A	Method Blank	Total/NA	Solid	Fill_Geo-0	

TestAmerica St. Louis

Tracer/Carrier Summary

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

TestAmerica Job ID: 160-3435-1

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)					
160-3435-1	L050190TUB00	90					
160-3435-1 MS	L050190TUB00	90					
160-3435-1 MSD	L050190TUB00	90					
160-3435-2	L050191TUB00	90					
160-3435-3	L050192TUB00	91					
160-3435-4	L050193TUB00	90					
160-3435-5	L050194TUB00	89					
160-3435-6	L050195TUB00	90					
160-3435-7	L050196TUB00	92					
160-3435-8	L050197TUB00	91					
160-3435-9	L050247PRS00	90					
160-3435-10	L050248PES00	91					
160-3435-11	L050249PRS00	92					
160-3435-12	L050250PES00	91					
160-3435-13	L050251PRS00	88					
160-3435-14	L050252PES00	90					
160-3435-15	L050253PES00	91					
160-3435-16	L050254PES00	90					
160-3435-17	L050255PES00	93					
160-3435-18	L050256PRS00	90					
160-3435-19	L050257PES00	87					
160-3435-20	L050258PES00	89					
160-3435-21	L050259PRQ00	92					
160-3435-21 MS	L050259PRQ00	90					
160-3435-21 MSD	L050259PRQ00	90					
160-3435-22	L050259PRS00	87					
160-3435-23	L050260PES00	90					
160-3435-24	L050261PRS00	88					
160-3435-25	L050262PES00	89					
160-3435-26	L050263PES00	88					
160-3435-27	L050264PRS00	90					
160-3435-28	L050265PES00	89					
160-3435-29	L050266PUB00	92					
160-3435-30	L050267PUB00	89					
160-3435-31	L050268PUB00	95					
LCS 160-67949/2-A	Lab Control Sample	94					
LCS 160-67951/2-A	Lab Control Sample	95					
MB 160-67949/1-A	Method Blank	97					
MB 160-67951/1-A	Method Blank	94					

Tracer/Carrier Legend

Re = Re