ATTACHMENT F

CHAIN-OF-CUSTODY

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
	Revision: 3	Page 1 of 1
	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 Cutody ID No. F-080213-02 **Page** 1/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	Remarks
L100801BRS00	8/1/2013	15:14	S	C	X		X	X						1	Sys-FSS Samples LSA 10-08
L100802BES00	8/1/2013	15:23	S	C	X		X	X						1	
L100803BES00	8/1/2013	15:54	S	C	X		X	X						1	
L100804BRS00	8/1/2013	16:02	S	C	X		X	X						1	
L100805BES00	8/1/2013	16:08	S	C	X		X	X						1	
L100806BES00	8/1/2013	16:16	S	C	X		X	X						1	
L100807BRQ00	8/1/2013	17:40	S	C	X		X	X						1	
L100807BRS00	8/1/2013	17:40	S	C	X		X	X						1	
L100808BES00	8/1/2013	17:45	S	C	X		X	X						1	
L100809BES00	8/1/2013	16:35	S	C	X		X	X						1	
L100810BES00	8/1/2013	16:48	S	C	X		X	X						1	
L100811BRS00	8/1/2013	18:15	S	C	X		X	X						1	Sys-FSS Samples LSA 10-08

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-3-13 1500	Company Name: WEC	15:00 8-3-13	15	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-02	Shipper and Number:
Company Name:		Company Name:		Comments: Please re-analyze samples after a 21 day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

COPY

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
	Revision: 3	Page 1 of 1
	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 Cutody ID No. F-080213-02 **Page** 2/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	Remarks
L100812BES00	8/1/2013	18:15	S	C	X		X	X						1	SyS-FSS Samples LSA 10-08
L100813BES00	8/1/2013	17:01	S	C	X		X	X						1	
L100814BRS00	8/1/2013	18:00	S	C	X		X	X						1	SyS-FSS Samples LSA 10-08

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-3-13 1500	Company Name: WEC	8-3-13 1900	15	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-02	Shipper and Number:
Company Name:		Company Name:		Comments: Please re-analyze samples after a 21 day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

COPY

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
	Revision: 3	Page 1 of 1
	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 Cutody ID No. F-080213-01 **Page** 1/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)	Total Containers
L100816BUB00	8/1/2013	9:08	S	C	X		X	X	1
L100817BUB00	8/1/2013	9:18	S	C	X		X	X	1
L100818BUB00	8/1/2013	9:28	S	C	X		X	X	1
L100819BUB00	8/1/2013	9:38	S	C	X		X	X	1
L100820BUB00	8/1/2013	9:48	S	C	X		X	X	1
L100821BUB00	8/1/2013	9:58	S	C	X		X	X	1
L100822BUB00	8/1/2013	10:08	S	C	X		X	X	1
L100823BUB00	8/1/2013	10:18	S	C	X		X	X	1
L100824BUB00	8/1/2013	10:28	S	C	X		X	X	1
L100825BUB00	8/1/2013	10:38	S	C	X		X	X	1
L100826BUB00	8/1/2013	10:48	S	C	X		X	X	1
L100827BUB00	8/1/2013	10:58	S	C	X		X	X	1

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Remarks
Biased-FSS Samples LSA 1008

Biased-FSS Samples LSA 1008

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-3-13 1500	Company Name: WEC	8-3-13 15:00	13	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-01	Shipper and Number:
Company Name:		Company Name:		Comments: Please re-analyze samples after 21-day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

COPY

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
	Revision: 3	Page 1 of 1
	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 Cutody ID No. F-080213-01 **Page** 2/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	Remarks
L100828BUB00	8/1/2013	15:32	S	C	X		X	X						1	Biased - FSS Samples LSA 1008

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-5-13 1500	Company Name: WEC	8-5-13 1500	13	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-01	Shipper and Number:
Company Name:		Company Name:		Comments: Please re-analyze samples after 21-day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

COPY

ATTACHMENT G

SAMPLE ANALYSIS REPORT

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: 160-3234-1
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:
8/13/2013 5:15:07 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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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Job ID: 160-3234-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Westinghouse Electric Company LLC

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

Report Number: 160-3234-1

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

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

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

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

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

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

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

RECEIPT

The samples were received on 08/03/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.8° C, 2.2° C, 23.7° C and 25.1° C. Several of the samples were received on ice with a temperature of < 2C. For this job, there are only rad analyses requested. Samples for rad analysis do not require cold preservation.

TECHNETIUM-99 (ICPMS)

Samples L100801BRS00 (160-3234-1), L100802BES00 (160-3234-2), L100803BES00 (160-3234-3), L100804BRS00 (160-3234-4), L100805BES00 (160-3234-5), L100806BES00 (160-3234-6), L100807BRQ00 (160-3234-7), L100807BRS00 (160-3234-8), L100808BES00 (160-3234-9), L100809BES00 (160-3234-10), L100810BES00 (160-3234-11), L100811BRS00 (160-3234-12), L100812BES00 (160-3234-13), L100813BES00 (160-3234-14) and L100814BRS00 (160-3234-15) were analyzed for Technetium-99 (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 08/07/2013 and analyzed on 08/09/2013.

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

PERCENT SOLIDS

Job ID: 160-3234-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Samples L100801BRS00 (160-3234-1), L100802BES00 (160-3234-2), L100803BES00 (160-3234-3), L100804BRS00 (160-3234-4), L100805BES00 (160-3234-5), L100806BES00 (160-3234-6), L100807BRQ00 (160-3234-7), L100807BRS00 (160-3234-8), L100808BES00 (160-3234-9), L100809BES00 (160-3234-10), L100810BES00 (160-3234-11), L100811BRS00 (160-3234-12), L100812BES00 (160-3234-13), L100813BES00 (160-3234-14) and L100814BRS00 (160-3234-15) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/05/2013.

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

CESIUM-137 & OTHER GAMMA EMITTERS (GS)

Samples L100801BRS00 (160-3234-1), L100802BES00 (160-3234-2), L100803BES00 (160-3234-3), L100804BRS00 (160-3234-4), L100805BES00 (160-3234-5), L100806BES00 (160-3234-6), L100807BRQ00 (160-3234-7), L100807BRS00 (160-3234-8), L100808BES00 (160-3234-9), L100809BES00 (160-3234-10), L100810BES00 (160-3234-11), L100811BRS00 (160-3234-12), L100812BES00 (160-3234-13), L100813BES00 (160-3234-14) and L100814BRS00 (160-3234-15) were analyzed for Cesium-137 & Other Gamma Emitters (GS) in accordance with DOE GA-01-R. The samples were leached on 08/06/2013, prepared on 08/08/2013 and analyzed on 08/08/2013, 08/09/2013 and 08/12/2013.

Preparation Batch 65524:
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.

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. (160-3234-1 DU), (LCS 160-65524/2-A), (MB 160-65524/1-A), L100801BRS00 (160-3234-1), L100802BES00 (160-3234-2), L100803BES00 (160-3234-3), L100804BRS00 (160-3234-4), L100805BES00 (160-3234-5), L100806BES00 (160-3234-6), L100807BRQ00 (160-3234-7), L100807BRS00 (160-3234-8), L100808BES00 (160-3234-9), L100809BES00 (160-3234-10), L100810BES00 (160-3234-11), L100811BRS00 (160-3234-12), L100812BES00 (160-3234-13), L100813BES00 (160-3234-14), L100814BRS00 (160-3234-15)

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

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
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	Westinghouse Non-Proprietary Class 3	

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

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Chain of Cutody ID No. F-080213-02 **Page** 1/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers
L100801BRS00	8/1/2013	15:14	S	C	X		X	X						1
L100802BES00	8/1/2013	15:23	S	C	X		X	X						1
L100803BES00	8/1/2013	15:54	S	C	X		X	X						1
L100804BRS00	8/1/2013	16:02	S	C	X		X	X						1
L100805BES00	8/1/2013	16:08	S	C	X		X	X						1
L100806BES00	8/1/2013	16:16	S	C	X		X	X						1
L100807BRQ00	8/1/2013	17:40	S	C	X		X	X						1
L100807BRS00	8/1/2013	17:40	S	C	X		X	X						1
L100808BES00	8/1/2013	17:45	S	C	X		X	X						1
L100809BES00	8/1/2013	16:35	S	C	X		X	X						1
L100810BES00	8/1/2013	16:48	S	C	X		X	X						1
L100811BRS00	8/1/2013	18:15	S	C	X		X	X						1

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Remarks
Sys-FSS Samples LSA 10-08

Sys-FSS Samples LSA 10-08

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-3-13 1500	Company Name: WEC	8-3-13 15:00	15	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-02	Shipper and Number:
Company Name: T4	8-3-13 1601	Company Name:		Comments: Please re-analyze samples after a 21 day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

3234-1
3234-2

Hematite Decommissioning Project	Procedure HDP-PR-QA-006, *Chain of Custody*	
	Revision: 3	Page 1 of 1
	Westinghouse Non-Proprietary Class 3	

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

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Chain of Cutody ID No. F-080213-02 **Page** 2/2

Project Name:
Westinghouse Electric Company

Contact Person:
Gerald Rood

Phone Number:
314-810-3382

Sampler Name
Scott Jenkins

Sample ID	Date	Time	Matrix	Comp (C) or Grab (G)	Requested Analysis: Gamma Spec	Isotopic Uranium	Tc-99	Gamma Spec (21 day ingrow for Ra-226)						Total Containers	Remarks
L100812BES00	8/1/2013	18:15	S	C	X		X	X						1	Sys-FSS Samples LSA 10-08
L100813BES00	8/1/2013	17:01	S	C	X		X	X						1	
L100814BRS00	8/1/2013	18:00	S	C	X		X	X						1	Sys-FSS Samples LSA 10-08

Laboratory Name:
TA-MO

Laboratory Address:
13715 Rider Trail North

Phone No.
314-298-8566

Laboratory Contact Person:
Joe Walker

Phone No.
708-870-8453

Turn Around Time
Rush (7 days)

Relinquished by:	Date/Time	Received by:	Date/Time	Total	Cooler Temperature:
Company Name: WEC	8-3-13 1500	Company Name: WEC	8-3-13 1500	15	4 Degrees C
Received by:	Date/Time	Relinquished by:	Date/Time	Cooler ID: 0803-02	Shipper and Number:
Company Name: TA	8-3-13 1601	Company Name:		Comments: Please re-analyze samples after a 21 day ingrowth period.	
Relinquished by:	Date/Time	Received by:	Date/Time	Verified By:	
Company Name:		Company Name:			

Login Sample Receipt Checklist

Client: Westinghouse Electric Company LLC

Job Number: 160-3234-1

Login Number: 3234
List Number: 1
Creator: Vania, Ivan H

List Source: TestAmerica St. Louis

5

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Where requried
Cooler Temperature is acceptable.	True	See NCM
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Definitions/Glossary

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

TestAmerica Job ID: 160-3234-1

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: 160-3234-1

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: 160-3234-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3234-1	L100801BRS00	Solid	08/01/13 15:14	08/03/13 16:01
160-3234-2	L100802BES00	Solid	08/01/13 15:23	08/03/13 16:01
160-3234-3	L100803BES00	Solid	08/01/13 15:54	08/03/13 16:01
160-3234-4	L100804BRS00	Solid	08/01/13 16:02	08/03/13 16:01
160-3234-5	L100805BES00	Solid	08/01/13 16:08	08/03/13 16:01
160-3234-6	L100806BES00	Solid	08/01/13 16:16	08/03/13 16:01
160-3234-7	L100807BRQ00	Solid	08/01/13 17:40	08/03/13 16:01
160-3234-8	L100807BRS00	Solid	08/01/13 17:40	08/03/13 16:01
160-3234-9	L100808BES00	Solid	08/01/13 17:45	08/03/13 16:01
160-3234-10	L100809BES00	Solid	08/01/13 16:35	08/03/13 16:01
160-3234-11	L100810BES00	Solid	08/01/13 16:48	08/03/13 16:01
160-3234-12	L100811BRS00	Solid	08/01/13 18:15	08/03/13 16:01
160-3234-13	L100812BES00	Solid	08/01/13 18:09	08/03/13 16:01
160-3234-14	L100813BES00	Solid	08/01/13 17:01	08/03/13 16:01
160-3234-15	L100814BRS00	Solid	08/01/13 18:00	08/03/13 16:01

Client Sample ID: L100801BRS00

Date Collected: 08/01/13 15:14
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-1

Matrix: Solid
Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	0.000035	J	0.00065	0.000020	mg/Kg	☼	08/07/13 10:55	08/09/13 20:54	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	0.591		0.0244	0.0648	1.30	0.223	pCi/g	08/07/13 10:55	08/09/13 20:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*92*		*30 - 110*	*08/07/13 10:55*	*08/09/13 20:54*	*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	0.856		0.137	0.162		0.125	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Americium 241	0.0267	U	0.0743	0.0743		0.124	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Bismuth 212	1.28		0.435	0.455		0.398	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Bismuth 214	0.829		0.0961	0.129		0.0692	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Lead 212	0.998		0.0655	0.145		0.0550	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Lead 214	0.932		0.0831	0.128		0.0613	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Potassium 40	15.2		1.03	1.86		0.294	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Protactinium 231	-0.555	U	0.715	0.717		1.18	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Radium 226	0.829		0.0961	0.129	1.00	0.0692	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Thorium 234	5.71		0.464	0.756	1.00	0.927	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Uranium 235	1.60		0.191	0.252		0.221	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Protactinium 234m	10.5		4.41	4.54		3.99	pCi/g	08/08/13 09:35	08/12/13 21:23	1
Thorium 232	0.856		0.137	0.162		0.125	pCi/g	08/08/13 09:35	08/12/13 21:23	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.285*		*0.0417*	*0.0511*		*0.0341*	*pCi/g*	*08/08/13 09:35*	*08/12/13 21:23*	*1*

Client Sample ID: L100802BES00

Date Collected: 08/01/13 15:23
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-2

Matrix: Solid
Percent Solids: 82.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00066	0.000020	mg/Kg	☼	08/07/13 10:55	08/09/13 21:06	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	0.295		0.0459	0.0584	1.32	0.226	pCi/g	08/07/13 10:55	08/09/13 21:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*91*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:06*	*1*

Client Sample ID: L100802BES00

Date Collected: 08/01/13 15:23
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-2
Matrix: Solid

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**1.07**		0.171	0.203		0.155	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Americium 241	-0.0177	U	0.0702	0.0702		0.118	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Bismuth 212	**1.82**		0.488	0.523		0.349	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Bismuth 214	**0.889**		0.121	0.153		0.0753	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Lead 212	**1.03**		0.0865	0.159		0.0743	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Lead 214	**0.782**		0.107	0.134		0.0819	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Potassium 40	**17.6**		1.41	2.29		0.339	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Protactinium 231	-0.735	U	0.976	0.980		1.61	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Radium 226	**0.889**		0.121	0.153	1.00	0.0753	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Thorium 234	**1.42**		0.657	0.674	1.00	0.891	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Uranium 235	**0.279**		0.167	0.169		0.250	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Protactinium 234m	1.69	U	4.71	4.72		7.81	pCi/g	08/08/13 09:35	08/08/13 20:21	1
Thorium 232	**1.07**		0.171	0.203		0.155	pCi/g	08/08/13 09:35	08/08/13 20:21	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.338*		*0.0503*	*0.0613*		*0.0310*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:21*	*1*

Client Sample ID: L100803BES00

Date Collected: 08/01/13 15:54
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-3
Matrix: Solid
Percent Solids: 81.8

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	☼	08/07/13 10:55	08/09/13 21:10	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	**0.255**		0.0525	0.0611	1.29	0.220	pCi/g	08/07/13 10:55	08/09/13 21:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*94*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:10*	*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	**0.976**		0.116	0.153		0.0887	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Americium 241	0.00230	U	0.0633	0.0633		0.107	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Bismuth 212	**0.993**		0.309	0.326		0.278	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Bismuth 214	**0.712**		0.0795	0.109		0.0533	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Lead 212	**1.04**		0.0677	0.150		0.0533	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Lead 214	**0.797**		0.0733	0.111		0.0590	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Potassium 40	**18.1**		1.05	2.13		0.270	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Protactinium 231	0.403	U	0.221	0.226		1.06	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Radium 226	**0.712**		0.0795	0.109	1.00	0.0533	pCi/g	08/08/13 09:35	08/08/13 20:23	1

Client Sample ID: L100803BES00

Date Collected: 08/01/13 15:54
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-3
Matrix: Solid

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	**2.32**		0.652	0.696	1.00	0.792	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Uranium 235	**0.391**		0.148	0.153		0.162	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Protactinium 234m	0.000	U	2.98	2.98		7.14	pCi/g	08/08/13 09:35	08/08/13 20:23	1
Thorium 232	**0.976**		0.116	0.153		0.0887	pCi/g	08/08/13 09:35	08/08/13 20:23	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.328*		*0.0436*	*0.0553*		*0.0316*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:23*	*1*

Client Sample ID: L100804BRS00

Date Collected: 08/01/13 16:02
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-4
Matrix: Solid
Percent Solids: 84.1

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	☼	08/07/13 10:55	08/09/13 21:14	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	0.168	U	0.0663	0.0749	1.31	0.224	pCi/g	08/07/13 10:55	08/09/13 21:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*91*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:14*	*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	**0.741**		0.115	0.138		0.0897	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Americium 241	0.0223	U	0.0553	0.0553		0.0922	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Bismuth 212	**1.24**		0.364	0.386		0.300	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Bismuth 214	**0.662**		0.0810	0.106		0.0574	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Lead 212	**0.791**		0.0651	0.121		0.0697	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Lead 214	**0.734**		0.0831	0.113		0.0624	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Potassium 40	**16.0**		0.970	1.91		0.266	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Protactinium 231	0.363	U	0.213	0.216		0.997	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Radium 226	**0.662**		0.0810	0.106	1.00	0.0574	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Thorium 234	**1.52**		0.602	0.622	1.00	0.732	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Uranium 235	0.106	U	0.124	0.124		0.222	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Protactinium 234m	1.52	U	2.29	2.30		4.18	pCi/g	08/08/13 09:35	08/08/13 20:24	1
Thorium 232	**0.741**		0.115	0.138		0.0897	pCi/g	08/08/13 09:35	08/08/13 20:24	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.239*		*0.0434*	*0.0500*		*0.0374*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:24*	*1*

Client Sample ID: L100805BES00

Lab Sample ID: 160-3234-5

Date Collected: 08/01/13 16:08
Matrix: Solid
Date Received: 08/03/13 16:01
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	☼	08/07/13 10:55	08/09/13 21:25	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	**0.278**		0.0592	0.0713	1.35	0.231	pCi/g	08/07/13 10:55	08/09/13 21:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*90*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:25*	*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	**0.863**		0.107	0.139		0.103	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Americium 241	0.0237	U	0.0530	0.0530		0.0888	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Bismuth 212	**1.07**		0.304	0.323		0.242	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Bismuth 214	**0.683**		0.0869	0.112		0.0593	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Lead 212	**0.896**		0.0670	0.134		0.0542	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Lead 214	**0.690**		0.0829	0.110		0.0674	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Potassium 40	**16.5**		1.14	2.03		0.298	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Protactinium 231	**1.19**		0.460	0.478		0.748	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Radium 226	**0.683**		0.0869	0.112	1.00	0.0593	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Thorium 234	**0.793**		0.288	0.300	1.00	0.738	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Uranium 235	0.109	U	0.133	0.133		0.222	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Protactinium 234m	0.629	U	2.83	2.83		5.00	pCi/g	08/08/13 09:35	08/08/13 20:25	1
Thorium 232	**0.863**		0.107	0.139		0.103	pCi/g	08/08/13 09:35	08/08/13 20:25	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.321*		*0.0454*	*0.0563*		*0.0309*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:25*	*1*

Client Sample ID: L100806BES00

Lab Sample ID: 160-3234-6

Date Collected: 08/01/13 16:16
Matrix: Solid
Date Received: 08/03/13 16:01
Percent Solids: 86.4

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	☼	08/07/13 10:55	08/09/13 21:29	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	0.188	U	0.117	0.132	1.29	0.221	pCi/g	08/07/13 10:55	08/09/13 21:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*89*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:29*	*1*

Client Sample ID: L100806BES00

Date Collected: 08/01/13 16:16
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-6
Matrix: Solid

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.814**		0.120	0.146		0.0686	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Americium 241	-0.000761	U	0.0479	0.0479		0.0816	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Bismuth 212	**0.729**		0.329	0.338		0.337	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Bismuth 214	**0.623**		0.0879	0.109		0.0596	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Lead 212	**0.823**		0.0682	0.126		0.0542	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Lead 214	**0.599**		0.0766	0.0987		0.0816	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Potassium 40	**14.0**		1.11	1.81		0.163	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Protactinium 231	0.450	U	0.259	0.264		1.12	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Radium 226	**0.623**		0.0879	0.109	1.00	0.0596	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Thorium 234	**0.835**		0.304	0.316	1.00	0.784	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Uranium 235	0.138	U	0.140	0.140		0.236	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Protactinium 234m	-0.0317	U	3.19	3.19		5.78	pCi/g	08/08/13 09:35	08/08/13 20:26	1
Thorium 232	**0.814**		0.120	0.146		0.0686	pCi/g	08/08/13 09:35	08/08/13 20:26	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.269*		*0.0442*	*0.0523*		*0.0319*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:26*	*1*

Client Sample ID: L100807BRQ00

Date Collected: 08/01/13 17:40
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-7
Matrix: Solid
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	☼	08/07/13 10:55	08/09/13 21:33	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	**0.276**		0.0225	0.0375	1.38	0.237	pCi/g	08/07/13 10:55	08/09/13 21:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*90*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:33*	*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	**0.772**		0.0993	0.127		0.0477	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Americium 241	0.000	U	0.0260	0.0260		0.0800	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Bismuth 212	**1.08**		0.312	0.332		0.265	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Bismuth 214	**0.605**		0.0790	0.101		0.0565	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Lead 212	**0.842**		0.0605	0.125		0.0476	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Lead 214	**0.703**		0.0742	0.104		0.0516	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Potassium 40	**13.2**		0.918	1.63		0.286	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Protactinium 231	0.416	U	0.288	0.291		0.853	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Radium 226	**0.605**		0.0790	0.101	1.00	0.0565	pCi/g	08/08/13 09:35	08/08/13 20:27	1

Client Sample ID: L100807BRQ00

Date Collected: 08/01/13 17:40
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-7
Matrix: Solid

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	**1.14**		0.585	0.597	1.00	0.745	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Uranium 235	0.0427	U	0.0895	0.0896		0.193	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Protactinium 234m	3.54	U	2.66	2.68		4.35	pCi/g	08/08/13 09:35	08/08/13 20:27	1
Thorium 232	**0.772**		0.0993	0.127		0.0477	pCi/g	08/08/13 09:35	08/08/13 20:27	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.293*		*0.0345*	*0.0460*		*0.0170*	*pCi/g*	*08/08/13 09:35*	*08/08/13 20:27*	*1*

Client Sample ID: L100807BRS00

Date Collected: 08/01/13 17:40
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-8
Matrix: Solid
Percent Solids: 74.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00074	0.000022	mg/Kg	☼	08/07/13 10:55	08/09/13 21:37	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	0.194	U	0.121	0.136	1.47	0.252	pCi/g	08/07/13 10:55	08/09/13 21:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*90*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:37*	*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	**0.764**		0.0884	0.118		0.0793	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Americium 241	0.0157	U	0.0480	0.0481		0.0804	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Bismuth 212	**0.937**		0.225	0.245		0.163	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Bismuth 214	**0.573**		0.0709	0.0926		0.0487	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Lead 212	**0.713**		0.0528	0.106		0.0451	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Lead 214	**0.596**		0.0692	0.0929		0.0541	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Potassium 40	**13.0**		0.824	1.57		0.229	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Protactinium 231	0.246	U	0.145	0.147		0.842	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Radium 226	**0.573**		0.0709	0.0926	1.00	0.0487	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Thorium 234	**0.717**		0.462	0.468	1.00	0.623	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Uranium 235	**0.155**		0.124	0.125		0.152	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Protactinium 234m	0.731	U	2.21	2.21		3.41	pCi/g	08/08/13 09:35	08/08/13 21:22	1
Thorium 232	**0.764**		0.0884	0.118		0.0793	pCi/g	08/08/13 09:35	08/08/13 21:22	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.258*		*0.0326*	*0.0422*		*0.0223*	*pCi/g*	*08/08/13 09:35*	*08/08/13 21:22*	*1*

Client Sample ID: L100808BES00

Lab Sample ID: 160-3234-9

Date Collected: 08/01/13 17:45
Matrix: Solid
Date Received: 08/03/13 16:01
Percent Solids: 78.0

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	☼	08/07/13 10:55	08/09/13 21:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium 99	0.0296	U	0.0793	0.0865	1.41	0.241	pCi/g	08/07/13 10:55	08/09/13 21:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*92*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:41*	*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	**1.04**		0.134	0.171		0.111	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Americium 241	0.00444	U	0.0681	0.0681		0.115	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Bismuth 212	**0.589**		0.374	0.379		0.564	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Bismuth 214	**0.775**		0.104	0.131		0.0616	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Lead 212	**1.05**		0.0809	0.158		0.0683	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Lead 214	**0.765**		0.0873	0.118		0.0839	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Potassium 40	**18.1**		1.33	2.28		0.293	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Protactinium 231	0.451	U	0.254	0.259		1.31	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Radium 226	**0.775**		0.104	0.131	1.00	0.0616	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Thorium 234	0.795	U	0.331	0.341	1.00	0.878	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Uranium 235	0.0326	U	0.100	0.100		0.276	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Protactinium 234m	1.84	U	3.12	3.12		5.28	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Thorium 232	**1.04**		0.134	0.171		0.111	pCi/g	08/08/13 09:35	08/08/13 22:11	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.300*		*0.0571*	*0.0650*		*0.0449*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:11*	*1*

Client Sample ID: L100809BES00

Lab Sample ID: 160-3234-10

Date Collected: 08/01/13 16:35
Matrix: Solid
Date Received: 08/03/13 16:01
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	**0.000041**	**J**	0.00064	0.000019	mg/Kg	☼	08/07/13 10:55	08/09/13 21:45	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	**0.695**		0.133	0.166	1.27	0.218	pCi/g	08/07/13 10:55	08/09/13 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*89*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:45*	*1*

Client Sample ID: L100809BES00

Date Collected: 08/01/13 16:35
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-10
Matrix: Solid

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.911**		0.0981	0.135		0.102	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Americium 241	0.0190	U	0.0420	0.0420		0.0702	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Bismuth 212	**0.972**		0.298	0.315		0.269	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Bismuth 214	**0.666**		0.0837	0.109		0.0576	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Lead 212	**0.829**		0.0604	0.123		0.0487	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Lead 214	**0.662**		0.0673	0.0963		0.0586	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Potassium 40	**14.8**		0.965	1.80		0.318	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Protactinium 231	0.356	U	0.281	0.284		0.893	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Radium 226	**0.666**		0.0837	0.109	1.00	0.0576	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Thorium 234	**1.42**		0.649	0.666	1.00	0.782	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Uranium 235	**0.195**		0.101	0.103		0.154	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Protactinium 234m	2.78	U	2.80	2.82		4.52	pCi/g	08/08/13 09:35	08/08/13 22:08	1
Thorium 232	**0.911**		0.0981	0.135		0.102	pCi/g	08/08/13 09:35	08/08/13 22:08	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.250*		*0.0353*	*0.0438*		*0.0260*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:08*	*1*

Client Sample ID: L100810BES00

Date Collected: 08/01/13 16:48
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-11
Matrix: Solid
Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	ND		0.00063	0.000019	mg/Kg	☼	08/07/13 10:55	08/09/13 21:48	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	**0.266**		0.0798	0.0909	1.25	0.215	pCi/g	08/07/13 10:55	08/09/13 21:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*92*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:48*	*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	**0.780**		0.107	0.133		0.0851	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Americium 241	-0.000887	U	0.0473	0.0473		0.0800	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Bismuth 212	**0.788**		0.397	0.406		0.365	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Bismuth 214	**0.457**		0.0673	0.0824		0.0771	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Lead 212	**0.675**		0.0592	0.105		0.0645	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Lead 214	**0.545**		0.0712	0.0910		0.0601	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Potassium 40	**12.8**		0.847	1.56		0.250	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Protactinium 231	0.0973	U	0.181	0.181		0.724	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Radium 226	**0.457**		0.0673	0.0824	1.00	0.0771	pCi/g	08/08/13 09:35	08/08/13 22:09	1

Client Sample ID: L100810BES00

Date Collected: 08/01/13 16:48
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-11
Matrix: Solid

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	**1.34**		0.568	0.585	1.00	0.710	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Uranium 235	0.0268	U	0.0468	0.0469		0.161	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Protactinium 234m	**5.02**		2.61	2.66		2.48	pCi/g	08/08/13 09:35	08/08/13 22:09	1
Thorium 232	**0.780**		0.107	0.133		0.0851	pCi/g	08/08/13 09:35	08/08/13 22:09	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.243*		*0.0355*	*0.0435*		*0.0266*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:09*	*1*

Client Sample ID: L100811BRS00

Date Collected: 08/01/13 18:15
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-12
Matrix: Solid
Percent Solids: 83.5

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	☼	08/07/13 10:55	08/09/13 21:52	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	0.0301	U	0.0676	0.0738	1.30	0.223	pCi/g	08/07/13 10:55	08/09/13 21:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*92*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:52*	*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	**0.796**		0.132	0.155		0.122	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Americium 241	0.0352	U	0.0477	0.0478		0.0793	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Bismuth 212	**1.03**		0.454	0.466		0.426	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Bismuth 214	**0.705**		0.0992	0.123		0.0707	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Lead 212	**0.837**		0.0697	0.129		0.0571	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Lead 214	**0.820**		0.0806	0.117		0.0660	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Potassium 40	**13.4**		1.12	1.77		0.306	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Protactinium 231	0.418	U	0.300	0.304		1.01	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Radium 226	**0.705**		0.0992	0.123	1.00	0.0707	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Thorium 234	0.657	U	0.270	0.278	1.00	0.808	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Uranium 235	-0.00434	U	0.134	0.134		0.230	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Protactinium 234m	1.04	U	3.05	3.06		5.34	pCi/g	08/08/13 09:35	08/08/13 22:11	1
Thorium 232	**0.796**		0.132	0.155		0.122	pCi/g	08/08/13 09:35	08/08/13 22:11	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.277*		*0.0473*	*0.0554*		*0.0353*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:11*	*1*

Client Sample ID: L100812BES00

Date Collected: 08/01/13 18:09
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-13

Matrix: Solid
Percent Solids: 76.6

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	☼	08/07/13 10:55	08/09/13 21:56	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	0.0372	U	0.0681	0.0754	1.44	0.246	pCi/g	08/07/13 10:55	08/09/13 21:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*90*		*30 - 110*	*08/07/13 10:55*	*08/09/13 21:56*	*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	**1.01**		0.119	0.157		0.0742	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Americium 241	0.00986	U	0.0541	0.0541		0.0911	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Bismuth 212	**0.554**		0.286	0.292		0.418	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Bismuth 214	**0.709**		0.0877	0.114		0.0626	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Lead 212	**0.989**		0.0667	0.144		0.0501	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Lead 214	**0.834**		0.0846	0.121		0.0795	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Potassium 40	**15.5**		1.01	1.88		0.333	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Protactinium 231	0.406	U	0.206	0.210		0.845	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Radium 226	**0.709**		0.0877	0.114	1.00	0.0626	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Thorium 234	**1.15**		0.428	0.444	1.00	0.662	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Uranium 235	0.121	U	0.132	0.132		0.216	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Protactinium 234m	0.663	U	2.69	2.70		4.69	pCi/g	08/08/13 09:35	08/09/13 10:03	1
Thorium 232	**1.01**		0.119	0.157		0.0742	pCi/g	08/08/13 09:35	08/09/13 10:03	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.302*		*0.0422*	*0.0526*		*0.0315*	*pCi/g*	*08/08/13 09:35*	*08/09/13 10:03*	*1*

Client Sample ID: L100813BES00

Date Collected: 08/01/13 17:01
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-14

Matrix: Solid
Percent Solids: 86.8

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	☼	08/07/13 10:55	08/09/13 22:00	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	**0.250**		0.0490	0.0601	1.27	0.217	pCi/g	08/07/13 10:55	08/09/13 22:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*90*		*30 - 110*	*08/07/13 10:55*	*08/09/13 22:00*	*1*

Client Sample ID: L100813BES00

Lab Sample ID: 160-3234-14

Date Collected: 08/01/13 17:01

Matrix: Solid

Date Received: 08/03/13 16:01

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	**0.883**		0.138	0.165		0.0968	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Americium 241	-0.00274	U	0.0589	0.0589		0.100	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Bismuth 212	**1.41**		0.372	0.400		0.233	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Bismuth 214	**0.613**		0.0882	0.109		0.0465	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Lead 212	**0.760**		0.0722	0.122		0.0657	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Lead 214	**0.598**		0.0874	0.107		0.0724	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Potassium 40	**13.9**		1.20	1.86		0.310	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Protactinium 231	-0.592	U	0.776	0.778		1.28	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Radium 226	**0.613**		0.0882	0.109	1.00	0.0465	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Thorium 234	0.846	U	0.661	0.667	1.00	0.877	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Uranium 235	0.00379	U	0.0551	0.0551		0.227	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Protactinium 234m	-0.0531	U	3.37	3.37		6.17	pCi/g	08/08/13 09:35	08/08/13 22:43	1
Thorium 232	**0.883**		0.138	0.165		0.0968	pCi/g	08/08/13 09:35	08/08/13 22:43	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.317*		*0.0506*	*0.0604*		*0.0329*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:43*	*1*

Client Sample ID: L100814BRS00

Lab Sample ID: 160-3234-15

Date Collected: 08/01/13 18:00

Matrix: Solid

Date Received: 08/03/13 16:01

Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technetium 99	**0.000026**	**J**	0.00064	0.000019	mg/Kg	☼	08/07/13 10:55	08/09/13 22:12	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	**0.444**		0.0721	0.0949	1.28	0.218	pCi/g	08/07/13 10:55	08/09/13 22:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Re	*87*		*30 - 110*	*08/07/13 10:55*	*08/09/13 22:12*	*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	**0.658**		0.0816	0.106		0.0829	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Americium 241	0.00952	U	0.0479	0.0479		0.0806	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Bismuth 212	**0.660**		0.289	0.297		0.280	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Bismuth 214	**0.526**		0.0666	0.0861		0.0491	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Lead 212	**0.647**		0.0537	0.0995		0.0467	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Lead 214	**0.599**		0.0752	0.0976		0.0584	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Potassium 40	**10.7**		0.823	1.37		0.340	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Protactinium 231	0.383	U	0.309	0.311		0.827	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Radium 226	**0.526**		0.0666	0.0861	1.00	0.0491	pCi/g	08/08/13 09:35	08/08/13 22:44	1

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

TestAmerica Job ID: 160-3234-1

Client Sample ID: L100814BRS00
Date Collected: 08/01/13 18:00
Date Received: 08/03/13 16:01

Lab Sample ID: 160-3234-15
Matrix: Solid

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	**0.947**		0.570	0.579	1.00	0.713	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Uranium 235	0.0719	U	0.110	0.110		0.182	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Protactinium 234m	1.11	U	2.26	2.26		3.86	pCi/g	08/08/13 09:35	08/08/13 22:44	1
Thorium 232	**0.658**		0.0816	0.106		0.0829	pCi/g	08/08/13 09:35	08/08/13 22:44	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.203*		*0.0303*	*0.0369*		*0.0221*	*pCi/g*	*08/08/13 09:35*	*08/08/13 22:44*	*1*

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