CLOSEOUT REPORT REV 2 –
APPENDIX A LABORTORY REPORTS

U.S. DEPARTMENT OF ENERGY

HIGH FLUX BEAM REACTOR STACK (BLDG 705)
DECOMMISSIONING AND DEMOLITION (D&D)
BROOKHAVEN NATIONAL LABORATORY
UPTON, NY
CERCLIS NUMBER NY 789008975

A-1 Pre-Mobilization Sampling/ Characterization

A-2 Reference Area Sampling

A-3 CAMP Data

A-4 On-Site Soil for Reuse as Backfill

A-5 Imported Backfill

A-6 Waste Characterization

A-7 Final Status Survey

A-1
Pre-Mobilization Sampling/ Characterization

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-38495-4
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
8/18/2020 1:38:25 PM
Jayna Awalt, Project Manager II
(314)298-8566
Jayna.Awalt@Eurofinset.com

Designee for

Ivan Vania, Project Manager II
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Ivan.Vania@Eurofinset.com

LINKS

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

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

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Job ID: 160-38495-4

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediation Inc

Project: BNL Decommissioning Project

Report Number: 160-38495-4

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 06/24/2020; the samples arrived in good condition, properly preserved. The temperature of the coolers at receipt was 23.6 C.

Receipt Exceptions

Job ID: 160-38495-4 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The container for the following sample was received empty: HFBR-019-061820 (160-38495-19). Nickel-63 analysis has been cancelled.

RADIUM-226 (GFPC)
Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Radium-226 (GFPC) - Acid Leach in accordance with EPA 903.0. The samples were leached on 07/14/2020, prepared on 07/14/2020 and analyzed on 08/06/2020.

Insufficient sample volume was available to perform a sample duplicate for the following samples: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. Filter sample was split between multiple analyses.

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

STRONTIUM-90 (GFPC)
Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were leached on 07/14/2020, prepared on 07/15/2020 and analyzed on 07/28/2020.

Insufficient sample volume was available to perform a sample duplicate for the following samples: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. The samples were filters that were split between multiple analyses.

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

ISOTOPIC CURIUM AND/OR AMERICIUM 241 (ALPHA SPECTROMETRY)
Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Isotopic Curium and/or Americium 241 (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 07/14/2020, prepared on 07/22/2020 and analyzed on 07/30/2020.

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32). A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. The samples were filters that were split between multiple analyses.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with DOE A01R_Pu. The samples were leached on 07/14/2020, prepared on 07/22/2020 and analyzed on 07/30/2020.

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32). A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. The samples were filters that were split between multiple analyses.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE A01R_U. The samples were leached on 07/14/2020, prepared on 07/22/2020 and analyzed on 07/30/2020.

Job ID: 160-38495-4 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32). A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. The samples were filters that were split between multiple analyses.

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

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215243

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

M. Pionski

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: ~~NONE~~	Date: 6.18.2020	COC No:
Company Name: CABRERA Services	Tel/Fax: 937-479-3468	Lab Contact: IVAN VANIA	Carrier:	____ of ____ COCs
Address: 50 FOUNDER WAY STE 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT, 06108	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven NATL LAB	☒ 1 week			
Site: 705 STACK DEMO	☐ 2 days			Job / SDG No.:
PO # 1085-20-01-01&A	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	Sample Specific Notes:
HFBR-001-061820	6/18/20	1400		WET SMEAR				X	X	2x = H3, N63
HFBR-002-061820								X	X	
HFBR-003-061820								X	X	
HFBR-004-061820								X	X	
HFBR-005-061820								X	X	
HFBR-006-061820								X	X	
HFBR-007-061820								X	X	
HFBR-008-061820								X	X	
HFBR-009-061820								X	X	
HFBR-010-061820								X	X	
HFBR-011-061820								X	X	
HFBR-012-061820								X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Waters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] Bennett	Cabrera Services	6/19/20	[signature] Foster	BNL	6/19/2020 0930
[signature] Foster	BNL	6/22/2020 0940	[signature]	BNL	6/22/2020 0940
[signature] FEDEX	BNL	6/22/2020 1400	Received in Laboratory by: FEDEX	Company:	Date/Time:

Michael Cunningham ETA STL 6/24/2020 13:15

160-38495 Chain of Custody

8/18/2020

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215244

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Rob Frank	Site Contact: M. Plonski	Date: 6.18.2020	COC No:
Company Name: Cabrera Services	Tel/Fax:	Lab Contact: Evan Viola	Carrier:	____ of ____ COCs
Address: 50 Founders Plaza Ste 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. Hartford, CT 06108	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven Natl Labs	☒ 1 week			
Site: 705 Stack Demo	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	GAMMA SPEC	ISO-U	Alpha SPEC Sr-90	Sample Specific Notes:
HFBR-013-061820	6/18/20	1400		(WIPE (WET)				X	X				2X = 1(H3) + 1(Ni63)
HFBR-014-061820								X	X				
HFBR-015-061820								X	X				
HFBR-016-061820								X	X				
HFBR-017-061820								X	X				
HFBR-018-061820								X	X				
HFBR-019-061820								X	X				
HFBR-020-061820								X	X				
HFBR-D007-061820										X	X	X	DRY WIPES
HFBR-D007A-061820										X	X	X	
HFBR-D008-061820										X	X	X	
HFBR-D008A-061820										X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Derek Bond	Cabrera Services	6/19/20	Foster	BNL	6/19/2020 0930
Foster	BNL	6/22/2020 0940	Theodore D'Heron	BNL	6/22/2020 0940
Theodore D'Heron	BNL	6/22/2020 NOON	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX Michael Cunningham TEA STL 6/24/2020 13:15

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8/18/2020

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215245

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: M. PLOSKI	Date: 6.18.20	COC No:
Company Name: CABRERA SERVICES	Tel/Fax:	Lab Contact: JOAN VANCA	Carrier:	____ of ____ COCs
Address: 50 FOUNDERS Plaza Ste 201	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT 06108	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: BROOKHAVEN NATIONAL LAB	☒ 1 week			
Site: 705 STACK BLDG	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec	FSO-GL	Alpha Spec Sr-90	Sample Specific Notes:
HFBR-D009-061820	6/18/20			DRY WIPE				X	X	X	DRY WIPES
HFBR-D009A-061820				↓				X	X	X	↓
HFBR-D020-061820								X	X	X	
HFBR-D020A-061820								X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Wes Bernd	Cabrera Services	6/19/20	FOSTER	BNL	6/19/2020 0930
FOSTER	BNL	6/22/2020 0940	Theodore G. Heuer	BNL	6/22/2020 0940
Theodore G. Heuer	BNL	6/22/2020 1400	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Micha Konieczny ETA STL 6/24/2020 13:15

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8/18/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-38495-4

Login Number: 38495
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-38495-4
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-4

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium and Neptunium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
Acid Leach	Preparation, Acid Leach	TAL SOP	TAL SL
DPS-21	Preparation, Digestion/Precipitate Separation (21-Day In-Growth)	None	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
None = None
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38495-29	HFBR-D007-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-30	HFBR-D008-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-31	HFBR-D009-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-32	HFBR-D020-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	

Client Sample ID: HFBR-D007-061820 COMP

Date Collected: 06/18/20 14:00
Date Received: 06/24/20 13:15

Lab Sample ID: 160-38495-29

Matrix: Filter

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0120	U	0.280	0.280	5.00	0.632	pCi/Sample	07/14/20 15:56	08/06/20 10:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.3*			*07/14/20 15:56*	*08/06/20 10:35*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**13.6**		1.77	2.09	15.0	1.66	pCi/Sample	07/15/20 16:21	07/28/20 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.1*			*07/15/20 16:21*	*07/28/20 16:10*	*1*
Y Carrier	*90.5*			*07/15/20 16:21*	*07/28/20 16:10*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**1.28**		0.236	0.275	5.00	0.163	pCi/Sample	07/22/20 21:58	07/30/20 14:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*91.9*			*07/22/20 21:58*	*07/30/20 14:53*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0469	U	0.0622	0.0623	5.00	0.104	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1
Plutonium-239/240	**4.29**		0.405	0.542	5.00	0.115	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*108*			*07/22/20 22:02*	*07/30/20 14:51*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.184**		0.113	0.114	5.00	0.141	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-235	0.000	U	0.0405	0.0405	5.00	0.109	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-238	**0.195**		0.105	0.106	5.00	0.110	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*73.6*			*07/22/20 22:04*	*07/30/20 14:55*	*1*

Client Sample ID: HFBR-D008-061820 COMP

Lab Sample ID: 160-38495-30

Date Collected: 06/18/20 14:00

Matrix: Filter

Date Received: 06/24/20 13:15

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.429	U	0.542	0.543	5.00	0.898	pCi/Sample	07/14/20 15:56	08/06/20 10:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*			*07/14/20 15:56*	*08/06/20 10:35*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**26.2**		2.40	3.22	15.0	1.69	pCi/Sample	07/15/20 16:21	07/28/20 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*73.6*			*07/15/20 16:21*	*07/28/20 16:10*	*1*
Y Carrier	*83.7*			*07/15/20 16:21*	*07/28/20 16:10*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**2.24**		0.315	0.400	5.00	0.185	pCi/Sample	07/22/20 21:58	07/30/20 14:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*88.6*			*07/22/20 21:58*	*07/30/20 14:53*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0447	U	0.0536	0.0538	5.00	0.0856	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1
Plutonium-239/240	**4.93**		0.422	0.592	5.00	0.0990	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*104*			*07/22/20 22:02*	*07/30/20 14:51*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.173**		0.116	0.117	5.00	0.155	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-235	-0.0144	U	0.0498	0.0499	5.00	0.138	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-238	**0.173**		0.106	0.107	5.00	0.128	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.8*			*07/22/20 22:04*	*07/30/20 14:55*	*1*

Client Sample ID: HFBR-D009-061820 COMP

Date Collected: 06/18/20 14:00
Date Received: 06/24/20 13:15

Lab Sample ID: 160-38495-31

Matrix: Filter

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.337	U	0.455	0.456	5.00	0.765	pCi/Sample	07/14/20 15:56	08/06/20 10:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.3*			*07/14/20 15:56*	*08/06/20 10:35*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**24.2**		2.20	2.96	15.0	1.57	pCi/Sample	07/15/20 16:21	07/28/20 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.3*			*07/15/20 16:21*	*07/28/20 16:10*	*1*
Y Carrier	*85.2*			*07/15/20 16:21*	*07/28/20 16:10*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**1.06**		0.217	0.246	5.00	0.157	pCi/Sample	07/22/20 21:58	07/30/20 14:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*98.2*			*07/22/20 21:58*	*07/30/20 14:53*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0390	U	0.0780	0.0781	5.00	0.140	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1
Plutonium-239/240	**3.26**		0.359	0.451	5.00	0.0935	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*105*			*07/22/20 22:02*	*07/30/20 14:51*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	0.0785	U	0.0924	0.0927	5.00	0.150	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-235	-0.0279	U	0.0395	0.0395	5.00	0.134	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-238	0.0895	U	0.0775	0.0779	5.00	0.107	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.7*			*07/22/20 22:04*	*07/30/20 14:55*	*1*

Client Sample ID: HFBR-D020-061820 COMP

Date Collected: 06/18/20 14:00
Date Received: 06/24/20 13:15

Lab Sample ID: 160-38495-32

Matrix: Filter

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.258	U	0.311	0.312	5.00	0.829	pCi/Sample	07/14/20 15:56	08/06/20 10:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*			*07/14/20 15:56*	*08/06/20 10:35*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**27.1**		2.30	3.20	15.0	1.50	pCi/Sample	07/15/20 16:21	07/28/20 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.7*			*07/15/20 16:21*	*07/28/20 16:10*	*1*
Y Carrier	*86.7*			*07/15/20 16:21*	*07/28/20 16:10*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**1.83**		0.268	0.335	5.00	0.106	pCi/Sample	07/22/20 21:58	07/30/20 14:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*94.6*			*07/22/20 21:58*	*07/30/20 14:53*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0373	U	0.0745	0.0746	5.00	0.134	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1
Plutonium-239/240	**4.27**		0.399	0.536	5.00	0.0280	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*106*			*07/22/20 22:02*	*07/30/20 14:51*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.211**		0.107	0.108	5.00	0.107	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-235	-0.0138	U	0.0277	0.0277	5.00	0.106	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-238	**0.122**		0.0801	0.0807	5.00	0.0850	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.7*			*07/22/20 22:04*	*07/30/20 14:55*	*1*

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-476294/7-A
Matrix: Filter
Analysis Batch: 478640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476294

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05269	U	0.492	0.493	5.00	1.01	pCi/Sample	07/14/20 15:56	08/06/20 10:36	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.8*			*07/14/20 15:56*	*08/06/20 10:36*	*1*

Lab Sample ID: LCS 160-476294/1-A
Matrix: Filter
Analysis Batch: 478640

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476294

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			56.7	55.94		6.23	1.00	0.621	pCi/Sam	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*82.0*		*40 - 110*

Lab Sample ID: LCSD 160-476294/2-A
Matrix: Filter
Analysis Batch: 478640

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476294

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			56.7	57.21		6.39	1.00	0.656	pCi/Sam	101	75 - 125	0.10	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*79.1*		*40 - 110*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-476440/7-A
Matrix: Filter
Analysis Batch: 477662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476440

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.4213	U	0.852	0.853	15.0	1.60	pCi/Sample	07/15/20 16:21	07/28/20 16:10	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.8*			*07/15/20 16:21*	*07/28/20 16:10*	*1*
Y Carrier	*86.7*			*07/15/20 16:21*	*07/28/20 16:10*	*1*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: LCS 160-476440/1-A
Matrix: Filter
Analysis Batch: 477662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476440

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			39.2	36.51		3.98	3.00	1.84	pCi/Sam	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*80.3*		*40 - 110*
Y Carrier	*88.6*		*40 - 110*

Lab Sample ID: LCSD 160-476440/2-A
Matrix: Filter
Analysis Batch: 477662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 476440

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Strontium-90			39.2	41.16		4.38	3.00	1.58	pCi/Sam	105	75 - 125	0.56	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Sr Carrier	*76.8*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-477220/1-A
Matrix: Filter
Analysis Batch: 478125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477220

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	0.01180	U	0.0783	0.0783	5.00	0.158	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-235	0.0000	U	0.0587	0.0587	5.00	0.141	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1
Uranium-238	0.08243		0.0623	0.0627	5.00	0.0353	pCi/Sample	07/22/20 22:04	07/30/20 14:55	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.3*			*07/22/20 22:04*	*07/30/20 14:55*	*1*

Lab Sample ID: LCS 160-477220/2-A
Matrix: Filter
Analysis Batch: 478128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 477220

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-234			15.9	16.26		1.63	1.00	0.213	pCi/Sam	102	84 - 120		
Uranium-238			16.3	16.48		1.65	1.00	0.148	pCi/Sam	101	82 - 122		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*72.0*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCSD 160-477220/3-A
Matrix: Filter
Analysis Batch: 478132

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 477220

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Uranium-234			15.9	15.64		1.58	1.00	0.151	pCi/Sam	98	84 - 120	0.19	1
Uranium-238			16.3	17.18		1.71	1.00	0.164	pCi/Sam	106	82 - 122	0.21	1

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Uranium-232	*83.2*		*30 - 110*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-477218/1-A
Matrix: Filter
Analysis Batch: 478143

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477218

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0000	U	0.0968	0.0968	5.00	0.190	pCi/Sample	07/22/20 21:58	07/30/20 14:53	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*92.2*			*07/22/20 21:58*	*07/30/20 14:53*	*1*

Lab Sample ID: LCS 160-477218/2-A
Matrix: Filter
Analysis Batch: 478147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 477218

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			18.5	17.72		2.12	1.00	0.184	pCi/Sam	96	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*89.1*		*30 - 110*

Lab Sample ID: LCSD 160-477218/3-A
Matrix: Filter
Analysis Batch: 478148

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 477218

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Americium-241			18.5	17.21		2.06	1.00	0.167	pCi/Sam	93	75 - 125	0.12	1

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Americium-243	*91.8*		*30 - 110*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Lab Sample ID: MB 160-477219/1-A
Matrix: Filter
Analysis Batch: 478090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477219

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.06652	U	0.0784	0.0786	5.00	0.127	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1
Plutonium-239/240	0.05707	U	0.0538	0.0540	5.00	0.0728	pCi/Sample	07/22/20 22:02	07/30/20 14:51	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*98.9*			*07/22/20 22:02*	*07/30/20 14:51*	*1*

Lab Sample ID: LCS 160-477219/2-A
Matrix: Filter
Analysis Batch: 478091

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 477219

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			13.1	13.96		1.39	1.00	0.108	pCi/Sam	107	80 - 125		
Plutonium-239/240			13.2	13.44		1.34	1.00	0.0935	pCi/Sam	102	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*105*		*30 - 110*

Lab Sample ID: LCSD 160-477219/3-A
Matrix: Filter
Analysis Batch: 478093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 477219

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Plutonium-238			13.1	12.39		1.24	1.00	0.0897	pCi/Sam	95	80 - 125	0.60	1
Plutonium-239/240			13.2	12.96		1.29	1.00	0.104	pCi/Sam	98	81 - 125	0.18	1

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Pu-242 (T)	*107*		*30 - 110*

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Leach Batch: 476263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	Acid Leach	
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	Acid Leach	
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	Acid Leach	
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	Acid Leach	

Prep Batch: 476294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	DPS-21	476263
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	DPS-21	476263
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	DPS-21	476263
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	DPS-21	476263
MB 160-476294/7-A	Method Blank	Total/NA	Filter	DPS-21	
LCS 160-476294/1-A	Lab Control Sample	Total/NA	Filter	DPS-21	
LCSD 160-476294/2-A	Lab Control Sample Dup	Total/NA	Filter	DPS-21	

Prep Batch: 476440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	DPS-7	476263
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	DPS-7	476263
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	DPS-7	476263
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	DPS-7	476263
MB 160-476440/7-A	Method Blank	Total/NA	Filter	DPS-7	
LCS 160-476440/1-A	Lab Control Sample	Total/NA	Filter	DPS-7	
LCSD 160-476440/2-A	Lab Control Sample Dup	Total/NA	Filter	DPS-7	

Prep Batch: 477218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	ExtChrom	476263
MB 160-477218/1-A	Method Blank	Total/NA	Filter	ExtChrom	
LCS 160-477218/2-A	Lab Control Sample	Total/NA	Filter	ExtChrom	
LCSD 160-477218/3-A	Lab Control Sample Dup	Total/NA	Filter	ExtChrom	

Prep Batch: 477219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	ExtChrom	476263
MB 160-477219/1-A	Method Blank	Total/NA	Filter	ExtChrom	
LCS 160-477219/2-A	Lab Control Sample	Total/NA	Filter	ExtChrom	
LCSD 160-477219/3-A	Lab Control Sample Dup	Total/NA	Filter	ExtChrom	

Prep Batch: 477220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	ExtChrom	476263
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	ExtChrom	476263

Rad (Continued)

Prep Batch: 477220 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-477220/1-A	Method Blank	Total/NA	Filter	ExtChrom	
LCS 160-477220/2-A	Lab Control Sample	Total/NA	Filter	ExtChrom	
LCSD 160-477220/3-A	Lab Control Sample Dup	Total/NA	Filter	ExtChrom	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-4

Method: 903.0 - Radium-226 (GFPC)

Matrix: Filter — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-476294/1-A	Lab Control Sample	82.0
LCSD 160-476294/2-A	Lab Control Sample Dup	79.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 903.0 - Radium-226 (GFPC)

Matrix: Filter — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	
160-38495-29	HFBR-D007-061820 COMP	82.3
160-38495-30	HFBR-D008-061820 COMP	84.3
160-38495-31	HFBR-D009-061820 COMP	82.3
160-38495-32	HFBR-D020-061820 COMP	84.3
MB 160-476294/7-A	Method Blank	82.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 905 - Strontium-90 (GFPC)

Matrix: Filter — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID		
160-38495-29	HFBR-D007-061820 COMP	75.1	90.5
160-38495-30	HFBR-D008-061820 COMP	73.6	83.7
160-38495-31	HFBR-D009-061820 COMP	79.3	85.2
160-38495-32	HFBR-D020-061820 COMP	77.7	86.7
MB 160-476440/7-A	Method Blank	75.8	86.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: 905 - Strontium-90 (GFPC)

Matrix: Filter — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
LCS 160-476440/1-A	Lab Control Sample	80.3	88.6
LCSD 160-476440/2-A	Lab Control Sample Dup	76.8	87.5

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-38495-4
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Am-243
Lab Sample ID	Client Sample ID	
160-38495-29	HFBR-D007-061820 COMP	91.9
160-38495-30	HFBR-D008-061820 COMP	88.6
160-38495-31	HFBR-D009-061820 COMP	98.2
160-38495-32	HFBR-D020-061820 COMP	94.6
MB 160-477218/1-A	Method Blank	92.2

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Am-243
Lab Sample ID	Client Sample ID	(30-110)
LCS 160-477218/2-A	Lab Control Sample	89.1
LCSD 160-477218/3-A	Lab Control Sample Dup	91.8

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	
160-38495-29	HFBR-D007-061820 COMP	108
160-38495-30	HFBR-D008-061820 COMP	104
160-38495-31	HFBR-D009-061820 COMP	105
160-38495-32	HFBR-D020-061820 COMP	106
MB 160-477219/1-A	Method Blank	98.9

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
LCS 160-477219/2-A	Lab Control Sample	105
LCSD 160-477219/3-A	Lab Control Sample Dup	107

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-38495-4
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	
160-38495-29	HFBR-D007-061820 COMP	73.6
160-38495-30	HFBR-D008-061820 COMP	74.8
160-38495-31	HFBR-D009-061820 COMP	79.7
160-38495-32	HFBR-D020-061820 COMP	79.7
MB 160-477220/1-A	Method Blank	74.3

Tracer/Carrier Legend

U-232 = Uranium-232

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Filter **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	(30-110)
LCS 160-477220/2-A	Lab Control Sample	72.0
LCSD 160-477220/3-A	Lab Control Sample Dup	83.2

Tracer/Carrier Legend

U-232 = Uranium-232

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-38687-1
Laboratory Sample Delivery Group: 160-38687-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
8/31/2020 4:39:45 PM

Ivan Vania, Project Manager II
(314)298-8566
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LINKS

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

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

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Job ID: 160-38687-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-38687-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference

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

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

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

RECEIPT

The samples were received on 7/15/2020 9:03 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 26.4º C.

METALS (ICP/MS)

Job ID: 160-38687-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 07/20/2020 and analyzed on 08/03/2020.

Preparation Batches 160-477286 and 160-478369, Analytical Batch 160-478591:
The following samples were diluted due to the nature of the sample matrix. Elevated reporting limits (RLs) are provided: HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8), HFBR-009-070820 (160-38687-9), (LCS 160-478369/2-A), (MB 160-478369/1-A), and (160-38687-A-1-P DU).

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

GAMMA SPECTROSCOPY

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Gamma Spectroscopy in accordance EPA 901.1. The samples were ground on 07/23/2020, prepared on 07/24/2020 and analyzed on 08/14/2020.

Preparation Batch 160-477440:
Due to the sample matrices, the following samples were under the target preparation weight of 260g. The samples were low density ground solids: HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8), and HFBR-009-070820 (160-38687-9).

The radium-226 detection goal was not met. This is due to elevated Compton backgrounds from activity in the samples (i.e. cesium-137): HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8), and HFBR-009-070820 (160-38687-9).

For samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8), HFBR-009-070820 (160-38687-9), (LCS 160-477440/2-A), (MB 160-477440/1-A), (460-213106-A-4-B), and (460-213106-A-4-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228

Job ID: 160-38687-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

STRONTIUM-90 (GFPC)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were leached on 07/23/2020, prepared on 07/31/2020 and analyzed on 08/11/2020.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A01-R_Pu. The samples were leached on 07/23/2020, prepared on 08/03/2020 and analyzed on 08/06/2020 and 08/07/2020.

Preparation Batch 160-478293:
The following samples were slow to elute through the preparation columns: HFBR-008-070820 (160-38687-8) and (160-38687-A-1-B DU).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with A-01-R U. The samples were leached on 07/23/2020, prepared on 08/03/2020 and analyzed on 08/06/2020.

Preparation Batch 160-478355:
The following samples were slow to elute through the preparation columns: HFBR-008-070820 (160-38687-8) and (160-38687-A-1-B DU).

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

TRITIUM

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Tritium in accordance with DOE. The samples were prepared on 08/06/2020 and analyzed on 08/09/2020.

Preparation Batch 160-478741:
The matrix spike recovery (69%) was outside the lower control limit (78%). Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. While the sample duplicate RPD (25%), RER (0.97), and DER (2.74) are all within limits, they are all toward the upper end, also suggesting potential sample non-homogeneity: (160-38687-C-1-B MS).

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

Job ID: 160-38687-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

NICKEL 59/63 (LSC)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Nickel 59/63 (LSC) in accordance with LSC-Nickel. The samples were leached on 07/23/2020, prepared on 07/30/2020 and analyzed on 08/05/2020 and 08/06/2020.

Preparation Batch 160-478071:
The batch samples were spun down on a centrifuge and filtered before being placed on a separation column. The following sample had a small amount of matrix that did not transfer onto the column while being filtered through a syringe: HFBR-003-070720 (160-38687-3).

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

RADIUM-226 (ALPHA SPECTROMETRY)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Radium-226 (Alpha spectrometry) in accordance with Pulverization. The samples were leached on 07/23/2020, prepared on 08/17/2020 and analyzed on 08/28/2020.

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

PARTICLE SIZE REDUCTION PREPARATION

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Particle Size Reduction Preparation in accordance with the laboratory SOP.. The samples were analyzed on 07/17/2020.

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

PERCENT SOLIDS

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 07/28/2020.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: None**	**Date:**	___1___ of __1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier:**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time** ☑ CALENDAR DAYS ☐ WORKING DAYS			Sampler: BNL
(315) 336-7721 ext. 218 Phone	TAT if different from Below _____ ☐ 2 weeks ☑ 1 week ☐ 2 days ☐ 1 day			**For Lab Use Only:** Walk-in Client: Lab Sampling:
Fax (315) 336-7722 FAX				
Project Name: BNL 705 Srtack Demo				Job / SDG No.:
Site: BNL				
P O # 1085-20-01-01				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: standard library	Ra-226 (Alpha Spectrometry)	Plutonium-238 and 239/240 (Alpha	Uranium-235 and 238 (Alpha Spec	Tritium (LSC)	Strontium-90 (GFPC)	Total Lead (ICP/MS)	Nickel-63(LSC)	Percent Moisture	Sample Specific Notes:
HFBR-001-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-002-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-003-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-004-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-005-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-006-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-007-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-008-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
HFBR-009-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x	composite sample (1-4)
				S	4	N	N										
				S	4	N	N										
				S	4	N	N										

160-38687 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Please Contact Mike Plonski @ 860-794-6915 upon receipt at the lab. Please Contact Mike Winters @ 352-610-2150 with analytical results.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by: FOSTER	Company: Brookhaven National Lab	Date/Time: 7/13/20 1505	Received by: Steven Woodburn	Company: BNL	Date/Time: 7/13/20 1506
Relinquished by: Steven Woodburn SHW	Company: BNL	Date/Time: 7/14/20 14:00	Received by: FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received in Laboratory by:	Company: ETA STL	Date/Time: JUL 15 2020 0903

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

P&T - Document

Date:	July 14, 2020			P&T- Number:	15447
License No.:	24-24817-01	Expiration Date:	12/31/2024	Weight:	41 lbs.
Requestor:	Mike Plonski (Cabrera) Nate Foster		Project/Activity Number:	24429/24467	
Request Department:	ES		Extension:		
Carrier:	FedEx Express, Third party Acct. # 2249-8165-1				
Prepaid:	☐	Collect:	☑	Air Waybill Number:	
Shipping Memo Number:	64683				
Name/Title of Signatory:	Steven A. Woodburn, Technical Supervisor I				
Notified Receiver of shipment per:	Mike Ridenhower			Date:	7/13/2020
Brief Description of Packaging (size)::	(1) 8 Gallon Drum (D=11" x H= 23")				

SHIP TO:	Test America 13715 Rider Trail North Earth City, MO 63045 COC #
ATTN:	RSO: Mike Ridenhower Tel: 314-298-8566 Email: mike.ridenhower@testamerica.com

24 Hr. Emergency Contact +1 (631) 344-2222
Packaging and Transportation Group
Shipper's Reference Number: P&T- 15447

Quantity:	Description:
1-Drum	Core Samples , Total 12506 grams **H3,Cs137,Co60,Eu152,Eu154,Ra226,Sr90,Ni63,Pu239,Pu138,Am241,U238** **Total Activity = 30214.2 Bq (816.6 nCi)**

Seal # uline 2508868

Radiological Surveys

0.2	mrem/h at Surface of	Samples	ERG #	161	Attached
0.2	mrem/h at Surface of	Drum			
N/A	Transport Index:				

UN 2910, Radioactive Material, Excepted Package, Limited Quantity of Material

Shippers Declaration:	☐ Yes ☑ No
Bill of Lading:	☐ Yes ☑ No

POTENTIAL HAZARDS

HEALTH:

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases
- Very low levels of contained radioactive materials and low radiation levels outside packages result in low risks to people. Damaged packages may release measurable amounts of radioactive material, but the resulting risks are expected to be low.
- Some radioactive materials cannot be detected by commonly available instruments.
- Packages do not have RADIOACTIVE I, II, or III labels. Some may have EMPTY labels or may have the word "Radioactive" in the Package marking.

Fire or Explosion

- Some of these materials may burn, but most do not ignite readily
- Many have cardboard outer packaging; content (physically large or small) can be of many different physical forms.
- Radioactivity does not change flammability or other properties of materials.

PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover. (**Emergency Contact number is also listed on this page**).
- Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- As an immediate precautionary measure, isolate sill or leak area for at lease 25 meters (75 feet) in all directions.
- Stay upwind.
- Keep authorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

EMERGENCY RESPONSE

FIRE

- Presence of radioactive material will not influence the fire control processes and should not influence selection techniques.
- Move containers from fire area if you can do it without risk.
- Do not remove damaged packages; move undamaged packages out of fire zone.

Small Fires

- Dry chemical, CO_2 water spray or regular foam.

Large Fires

- Water Spray, fog (flooding amounts).

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Cover liquid spill with sand, earth or other noncombustible abosrbent material.
- Cover powder spil with plastic sheet or tarp to minimize spreading.

FIRST AID

- Call 911 or emergency medical service
- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Give artifical respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20-minutes
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Shipper:

Brookhaven National Laboratory
Building 98, Rochester Street
Upton, N.Y. 11973-5000

UN2910, Radioactive Material, Excepted Package, Limited Quantity of Material

H3,Cs137,Co60,Eu152,Eu154,Ra226,Sr90,Ni63,Pu239,Pu138,Am241,U238
Total Activity = 30214.2 Bq (816.6 nCi)

24 Hr. Emergency Contact:
+1(631) 344-2222
Packaging and Transportation Group
Shipper's Reference Number: P&T- 15447

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-38687-1
SDG Number: 160-38687-1

Login Number: 38687
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Samples were received at roughly 4000 CPM > background. EHS was notified of
The cooler's custody seal, if present, is intact.	True	incoming samples prior to their arrival.
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Qualifiers

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
A-01-R	Isotopic Plutonium and Neptunium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
H3-04-RC	Tritium (LSC)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0301	Radium-226 (Alpha Spectrometry)	TAL-STL	TAL SL
Part Size Red	Particle Size Reduction Preparation	None	TAL SL
3050B	Preparation, Metals	SW846	TAL SL
DPS-0	Preparation, Digestion/ Precipitate	None	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL
Pulverize	Pulverize	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38687-1	HFBR-001-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-2	HFBR-002-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-3	HFBR-003-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-4	HFBR-004-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-5	HFBR-005-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-6	HFBR-006-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-7	HFBR-007-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-8	HFBR-008-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-9	HFBR-009-070820	Solid	07/08/20 15:30	07/15/20 09:03	

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Client Sample ID: HFBR-001-070720

Date Collected: 07/07/20 11:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.275	U	0.299	0.300	3.00	0.490	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*56.0*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*
Y Carrier	*86.4*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00957	U	0.0226	0.0227	1.00	0.0473	pCi/g	08/03/20 07:45	08/06/20 15:19	1
Plutonium-239/240	0.00383	U	0.0163	0.0163	1.00	0.0429	pCi/g	08/03/20 07:45	08/06/20 15:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*107*		*30 - 110*	*08/03/20 07:45*	*08/06/20 15:19*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00700	U	0.0192	0.0192	1.00	0.0451	pCi/g	08/03/20 11:51	08/06/20 15:13	1
Uranium-238	**0.281**		0.0924	0.0954	1.00	0.0419	pCi/g	08/03/20 11:51	08/06/20 15:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*104*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:13*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0468	U	0.181	0.181		0.248	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Cesium-137	0.0113	U	0.0967	0.0967		0.173	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Cobalt-60	-0.00439	U	0.143	0.143		0.0729	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-152	0.189	U	0.291	0.292		0.195	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-154	0.0548	U	0.0950	0.0952		0.148	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-155	0.0626	U	0.198	0.198		0.338	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Radium-226	**0.594**		0.171	0.182	1.00	0.114	pCi/g	07/24/20 21:46	08/14/20 10:00	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Bi-214	*0.594*		*0.171*	*0.182*		*0.114*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
K-40	*6.96*		*1.75*	*1.89*		*1.14*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Pb-212	*0.479*		*0.119*	*0.135*		*0.116*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Pb-214	*0.590*		*0.165*	*0.176*		*0.124*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Tl-208	*0.224*		*0.102*	*0.104*		*0.0961*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Client Sample ID: HFBR-001-070720

Lab Sample ID: 160-38687-1
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**6.05**		0.634	0.828	1.00	0.504	pCi/g	08/06/20 11:13	08/09/20 14:35	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.393	U	1.04	1.04	5.00	1.75	pCi/g	07/30/20 17:08	08/05/20 15:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*58.3*		*40 - 110*	*07/30/20 17:08*	*08/05/20 15:42*	*1*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.424**		0.0854	0.0925	1.00	0.0527	pCi/g	08/17/20 14:46	08/28/20 14:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*42.9*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:50*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-001-070720

Lab Sample ID: 160-38687-1
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 96.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**2.5**	**D**	0.29	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:17	2

Client Sample ID: HFBR-002-070720

Lab Sample ID: 160-38687-2
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.199	U	0.223	0.223	3.00	0.366	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.5*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*
Y Carrier	*80.0*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*

Client Sample ID: HFBR-002-070720

Date Collected: 07/07/20 11:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-2

Matrix: Solid

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00195	U	0.0170	0.0170	1.00	0.0483	pCi/g	08/03/20 07:45	08/06/20 15:19	1
Plutonium-239/240	-0.00782	U	0.00782	0.00785	1.00	0.0522	pCi/g	08/03/20 07:45	08/06/20 15:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*104*		*30 - 110*	*08/03/20 07:45*	*08/06/20 15:19*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0105	U	0.0210	0.0210	1.00	0.0315	pCi/g	08/03/20 11:51	08/06/20 15:13	1
Uranium-238	**0.330**		0.107	0.110	1.00	0.0521	pCi/g	08/03/20 11:51	08/06/20 15:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*98.0*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:13*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0262	U	0.159	0.159		0.272	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Cesium-137	0.0107	U	0.0645	0.0645		0.116	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Cobalt-60	0.00267	U	0.0945	0.0945		0.110	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Europium-152	**0.341**		0.131	0.136		0.178	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Europium-154	0.0580	U	0.125	0.126		0.125	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Europium-155	-0.00276	U	0.206	0.206		0.844	pCi/g	07/24/20 21:46	08/14/20 10:02	1
Radium-226	**0.397**		0.138	0.144	1.00	0.124	pCi/g	07/24/20 21:46	08/14/20 10:02	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Bi-214	*0.397*		*0.138*	*0.144*		*0.124*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:02*	*1*
K-40	*6.81*		*1.50*	*1.65*		*0.863*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:02*	*1*
Pb-212	*0.506*		*0.147*	*0.161*		*0.204*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:02*	*1*
Pb-214	*0.417*		*0.104*	*0.112*		*0.123*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:02*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0674	U	0.279	0.279	1.00	0.509	pCi/g	08/06/20 11:13	08/09/20 15:43	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.104	U	0.943	0.943	5.00	1.62	pCi/g	07/30/20 17:08	08/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*63.1*		*40 - 110*	*07/30/20 17:08*	*08/05/20 19:00*	*1*

Client Sample ID: HFBR-002-070720

Lab Sample ID: 160-38687-2
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.408**		0.0786	0.0857	1.00	0.0578	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*52.2*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:51*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-002-070720

Lab Sample ID: 160-38687-2
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 96.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**2.0**	**D**	0.28	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:34	2

Client Sample ID: HFBR-003-070720

Lab Sample ID: 160-38687-3
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0950	U	0.203	0.203	3.00	0.348	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.6*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*
Y Carrier	*82.2*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00412	U	0.0175	0.0175	1.00	0.0462	pCi/g	08/03/20 07:45	08/06/20 15:19	1
Plutonium-239/240	0.00206	U	0.0180	0.0180	1.00	0.0511	pCi/g	08/03/20 07:45	08/06/20 15:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.4*		*30 - 110*	*08/03/20 07:45*	*08/06/20 15:19*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0162	U	0.0336	0.0336	1.00	0.0657	pCi/g	08/03/20 11:51	08/06/20 15:13	1
Uranium-238	**0.213**		0.0799	0.0818	1.00	0.0358	pCi/g	08/03/20 11:51	08/06/20 15:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*101*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:13*	*1*

Client Sample ID: HFBR-003-070720

Date Collected: 07/07/20 11:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-3

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0851	U	0.195	0.195		0.328	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Cesium-137	0.0315	U	0.0691	0.0692		0.119	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Cobalt-60	0.0154	U	0.0765	0.0766		0.0913	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-152	-0.0885	U	0.161	0.161		0.268	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-154	0.0546	U	0.0418	0.0422		0.201	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Europium-155	0.000	U	0.0922	0.0922		0.690	pCi/g	07/24/20 21:46	08/14/20 10:00	1
Radium-226	**0.334**		0.142	0.146	1.00	0.163	pCi/g	07/24/20 21:46	08/14/20 10:00	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.706*		*0.223*	*0.235*		*0.124*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Bi-214	*0.334*		*0.142*	*0.146*		*0.163*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
K-40	*10.1*		*1.73*	*2.01*		*1.07*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Pb-212	*0.516*		*0.111*	*0.130*		*0.107*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*
Pb-214	*0.389*		*0.160*	*0.165*		*0.164*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:00*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.145	U	0.271	0.271	1.00	0.509	pCi/g	08/06/20 11:13	08/09/20 16:06	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.770	U	0.954	0.957	5.00	1.58	pCi/g	07/30/20 17:08	08/05/20 20:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*64.1*		*40 - 110*	*07/30/20 17:08*	*08/05/20 20:38*	*1*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.353**		0.0733	0.0790	1.00	0.0514	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*51.7*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:51*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-003-070720

Lab Sample ID: 160-38687-3
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**1.9**	**D**	0.29	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:37	2

Client Sample ID: HFBR-004-070720

Lab Sample ID: 160-38687-4
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.183	U	0.162	0.162	3.00	0.335	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*76.2*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*
Y Carrier	*83.0*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0112	U	0.00916	0.00921	1.00	0.0561	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	0.00374	U	0.0159	0.0159	1.00	0.0419	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*110*		*30 - 110*	*08/03/20 07:45*	*08/07/20 16:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00479	U	0.00677	0.00678	1.00	0.0536	pCi/g	08/03/20 11:51	08/06/20 15:13	1
Uranium-238	**0.297**		0.0960	0.0992	1.00	0.0371	pCi/g	08/03/20 11:51	08/06/20 15:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.0*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:13*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0406	U	0.294	0.294		0.502	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Cesium-137	0.0411	U	0.113	0.113		0.197	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Cobalt-60	-0.00652	U	0.110	0.110		0.135	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Europium-152	0.0844	U	0.0638	0.0644		0.302	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Europium-154	0.0839	U	0.114	0.114		0.236	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Europium-155	0.0807	U	0.243	0.244		0.416	pCi/g	07/24/20 21:46	08/14/20 10:03	1
Radium-226	0.272	U	0.151	0.153	1.00	0.489	pCi/g	07/24/20 21:46	08/14/20 10:03	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*6.89*		*1.65*	*1.79*		*0.726*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:03*	*1*

Client Sample ID: HFBR-004-070720

Lab Sample ID: 160-38687-4
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Pb-214	*0.484*		*0.163*	*0.171*		*0.201*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:03*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.101	U	0.262	0.262	1.00	0.481	pCi/g	08/06/20 11:13	08/09/20 16:28	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.401	U	0.971	0.972	5.00	1.64	pCi/g	07/30/20 17:08	08/05/20 22:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	*63.5*		*40 - 110*	*07/30/20 17:08*	*08/05/20 22:17*	*1*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.369**		0.0832	0.0887	1.00	0.0720	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
At-217	*52.5*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:51*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-004-070720

Lab Sample ID: 160-38687-4
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 99.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**3.3**	**D**	0.28	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:41	2

Client Sample ID: HFBR-005-070820

Lab Sample ID: 160-38687-5
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**89.7**		1.95	7.61	3.00	0.360	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	*74.8*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:25*	*1*

Client Sample ID: HFBR-005-070820

Date Collected: 07/08/20 15:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-5

Matrix: Solid

Method: 905 - Strontium-90 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	82.2		40 - 110	07/31/20 10:48	08/11/20 14:25	1

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0186	U	0.0312	0.0312	1.00	0.0560	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	**6.00**		0.423	0.658	1.00	0.0224	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	106		30 - 110	08/03/20 07:45	08/07/20 16:30	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0150	U	0.0292	0.0293	1.00	0.0562	pCi/g	08/03/20 11:51	08/06/20 15:14	1
Uranium-238	**0.255**		0.0946	0.0970	1.00	0.0685	pCi/g	08/03/20 11:51	08/06/20 15:14	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	84.4		30 - 110	08/03/20 11:51	08/06/20 15:14	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0924	U	1.14	1.14		1.89	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Cesium-137	**296**		2.64	30.9		0.497	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Cobalt-60	0.0210	U	0.116	0.116		0.131	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-152	0.653	U	0.943	0.945		1.27	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-154	0.263	U	0.105	0.109		0.853	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-155	-0.00330	U	1.97	1.97		3.21	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Radium-226	0.652	U	0.355	0.361	1.00	0.830	pCi/g	07/24/20 21:46	08/14/20 10:56	1

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
K-40	6.59		1.62	1.76		1.03	pCi/g	07/24/20 21:46	08/14/20 10:56	1

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**15.6**		0.941	1.67	1.00	0.487	pCi/g	08/06/20 11:13	08/09/20 16:51	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**5.34**		1.22	1.34	5.00	1.73	pCi/g	07/30/20 17:08	08/05/20 23:56	1

Client Sample ID: HFBR-005-070820

Lab Sample ID: 160-38687-5
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	59.0		40 - 110	07/30/20 17:08	08/05/20 23:56	1

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.294**		0.0706	0.0748	1.00	0.0573	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
At-217	59.2		30 - 110	08/17/20 14:46	08/28/20 14:51	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-005-070820

Lab Sample ID: 160-38687-5
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 98.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**2.2**	**D**	0.28	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:44	2

Client Sample ID: HFBR-006-070820

Lab Sample ID: 160-38687-6
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**62.0**		1.57	5.32	3.00	0.355	pCi/g	07/31/20 10:48	08/11/20 14:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.6		40 - 110	07/31/20 10:48	08/11/20 14:25	1
Y Carrier	83.4		40 - 110	07/31/20 10:48	08/11/20 14:25	1

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0480	U	0.0431	0.0433	1.00	0.0535	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	**5.81**		0.431	0.651	1.00	0.0240	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	86.7		30 - 110	08/03/20 07:45	08/07/20 16:30	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0197	U	0.0279	0.0279	1.00	0.0296	pCi/g	08/03/20 11:51	08/06/20 15:14	1
Uranium-238	**0.370**		0.108	0.113	1.00	0.0383	pCi/g	08/03/20 11:51	08/06/20 15:14	1

Client Sample ID: HFBR-006-070820

Date Collected: 07/08/20 15:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-6

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	87.2		30 - 110	08/03/20 11:51	08/06/20 15:14	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**1.12**		0.450	0.465		0.586	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Cesium-137	**157**		1.60	16.4		0.226	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Cobalt-60	-0.00575	U	0.0240	0.0240		0.129	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-152	0.0652	U	0.169	0.169		0.874	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-154	0.157	U	0.334	0.335		0.554	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Europium-155	-0.0411	U	0.119	0.119		1.97	pCi/g	07/24/20 21:46	08/14/20 10:56	1
Radium-226	**0.555**		0.337	0.342	1.00	0.404	pCi/g	07/24/20 21:46	08/14/20 10:56	1

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Ac-228	0.412		0.180	0.185		0.151	pCi/g	07/24/20 21:46	08/14/20 10:56	1
K-40	6.02		1.47	1.59		1.20	pCi/g	07/24/20 21:46	08/14/20 10:56	1

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**4.50**		0.553	0.680	1.00	0.483	pCi/g	08/06/20 11:13	08/09/20 17:13	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.81**		1.10	1.14	5.00	1.69	pCi/g	07/30/20 17:08	08/06/20 01:35	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	61.5		40 - 110	07/30/20 17:08	08/06/20 01:35	1

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.245**		0.0533	0.0571	1.00	0.0301	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
At-217	63.1		30 - 110	08/17/20 14:46	08/28/20 14:51	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-006-070820

Lab Sample ID: 160-38687-6
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 97.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**11**	**D**	0.30	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:48	2

Client Sample ID: HFBR-007-070820

Lab Sample ID: 160-38687-7
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**162**		2.52	13.5	3.00	0.358	pCi/g	07/31/20 10:48	08/11/20 14:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.9*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*
Y Carrier	*80.4*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	**0.159**		0.0711	0.0723	1.00	0.0238	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	**9.03**		0.536	0.929	1.00	0.0385	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.6*		*30 - 110*	*08/03/20 07:45*	*08/07/20 16:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0283	U	0.0389	0.0390	1.00	0.0630	pCi/g	08/03/20 11:51	08/06/20 15:14	1
Uranium-238	**0.721**		0.148	0.160	1.00	0.0468	pCi/g	08/03/20 11:51	08/06/20 15:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.8*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:14*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.714	U	1.81	1.82		3.00	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Cesium-137	**720**		4.53	73.6		1.21	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Cobalt-60	**0.132**		0.112	0.112		0.129	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Europium-152	0.654	U	0.543	0.547		2.29	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Europium-154	0.402	U	0.512	0.514		1.57	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Europium-155	0.550	U	1.18	1.18		1.98	pCi/g	07/24/20 21:46	08/14/20 10:57	1
Radium-226	0.592	U	1.33	1.33	1.00	2.20	pCi/g	07/24/20 21:46	08/14/20 10:57	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*10.1*		*1.95*	*2.20*		*0.692*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:57*	*1*

Client Sample ID: HFBR-007-070820

Lab Sample ID: 160-38687-7
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	35.1		1.41	3.40	1.00	0.511	pCi/g	08/06/20 11:13	08/09/20 17:36	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	18.4		1.62	2.51	5.00	1.72	pCi/g	07/30/20 17:08	08/06/20 03:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*60.0*		*40 - 110*	*07/30/20 17:08*	*08/06/20 03:14*	*1*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.483		0.0839	0.0932	1.00	0.0424	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*50.2*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:51*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-007-070820

Lab Sample ID: 160-38687-7
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 95.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	27	D	0.30	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:51	2

Client Sample ID: HFBR-008-070820

Lab Sample ID: 160-38687-8
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	63.8		1.68	5.49	3.00	0.400	pCi/g	07/31/20 10:48	08/11/20 14:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.1*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*
Y Carrier	*76.6*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*

Client Sample ID: HFBR-008-070820

Date Collected: 07/08/20 15:30
Date Received: 07/15/20 09:03

Lab Sample ID: 160-38687-8

Matrix: Solid

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0639		0.0452	0.0455	1.00	0.0240	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	3.52		0.336	0.447	1.00	0.0240	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.4*		*30 - 110*	*08/03/20 07:45*	*08/07/20 16:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0478		0.0428	0.0430	1.00	0.0287	pCi/g	08/03/20 11:51	08/06/20 15:14	1
Uranium-238	0.613		0.137	0.147	1.00	0.0230	pCi/g	08/03/20 11:51	08/06/20 15:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.2*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:14*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	1.42		0.856	0.869		1.14	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Cesium-137	354		3.62	37.0		0.572	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Cobalt-60	0.0261	U	0.211	0.211		0.252	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Europium-152	0.571	U	1.01	1.01		1.65	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Europium-154	0.0366	U	0.0657	0.0659		1.09	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Europium-155	0.413	U	1.69	1.69		2.80	pCi/g	07/24/20 21:46	08/14/20 10:55	1
Radium-226	-0.0408	U	1.06	1.06	1.00	2.42	pCi/g	07/24/20 21:46	08/14/20 10:55	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.797*		*0.332*	*0.342*		*0.255*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:55*	*1*
K-40	*5.95*		*1.97*	*2.07*		*1.60*	*pCi/g*	*07/24/20 21:46*	*08/14/20 10:55*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	55.8		1.75	5.21	1.00	0.503	pCi/g	08/06/20 11:13	08/09/20 17:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	6.44		1.13	1.31	5.00	1.51	pCi/g	07/30/20 17:08	08/06/20 04:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*68.0*		*40 - 110*	*07/30/20 17:08*	*08/06/20 04:53*	*1*

Client Sample ID: HFBR-008-070820

Lab Sample ID: 160-38687-8
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.326**		0.0697	0.0749	1.00	0.0479	pCi/g	08/17/20 14:46	08/28/20 14:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*53.7*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:51*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-008-070820

Lab Sample ID: 160-38687-8
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 96.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**38**	**D**	0.29	0.12	mg/Kg	☼	07/20/20 10:16	08/03/20 22:55	2

Client Sample ID: HFBR-009-070820

Lab Sample ID: 160-38687-9
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**167**		2.88	14.0	3.00	0.463	pCi/g	07/31/20 10:48	08/11/20 14:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*69.6*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*
Y Carrier	*75.1*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	**0.0930**		0.0592	0.0597	1.00	0.0565	pCi/g	08/03/20 07:45	08/07/20 16:30	1
Plutonium-239/240	**8.80**		0.546	0.919	1.00	0.0474	pCi/g	08/03/20 07:45	08/07/20 16:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.3*		*30 - 110*	*08/03/20 07:45*	*08/07/20 16:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00982	U	0.0196	0.0196	1.00	0.0294	pCi/g	08/03/20 11:51	08/06/20 15:14	1
Uranium-238	**0.309**		0.0998	0.103	1.00	0.0487	pCi/g	08/03/20 11:51	08/06/20 15:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*95.0*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:14*	*1*

Client Sample ID: HFBR-009-070820

Lab Sample ID: 160-38687-9

Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**2.19**		0.953	0.980		1.07	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Cesium-137	**251**		2.39	26.3		0.359	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Cobalt-60	**0.0765**		0.0539	0.0544		0.0648	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Europium-152	0.496	U	0.726	0.727		1.20	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Europium-154	0.438	U	0.381	0.383		0.759	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Europium-155	-0.00325	U	1.80	1.80		3.01	pCi/g	07/24/20 21:46	08/14/20 12:03	1
Radium-226	0.149	U	0.128	0.129	1.00	1.94	pCi/g	07/24/20 21:46	08/14/20 12:03	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*8.66*		*1.83*	*2.03*		*1.02*	*pCi/g*	*07/24/20 21:46*	*08/14/20 12:03*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**8.71**		0.717	1.05	1.00	0.477	pCi/g	08/06/20 11:13	08/09/20 18:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**4.74**		1.14	1.24	5.00	1.63	pCi/g	07/30/20 17:08	08/06/20 06:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*63.0*		*40 - 110*	*07/30/20 17:08*	*08/06/20 06:31*	*1*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.412**		0.0771	0.0845	1.00	0.0497	pCi/g	08/17/20 14:46	08/28/20 14:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*53.7*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:50*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			07/17/20 11:29	1

Client Sample ID: HFBR-009-070820

Lab Sample ID: 160-38687-9

Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03
Percent Solids: 97.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	**4.3**	**D**	0.30	0.13	mg/Kg	☼	07/20/20 10:16	08/03/20 22:58	2

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-476754/1-A ^2
Matrix: Solid
Analysis Batch: 478392

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 476754

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pb	0.24	U	0.29	0.12	mg/Kg		07/20/20 10:16	08/03/20 21:53	2

Lab Sample ID: LCS 160-476754/2-A ^2
Matrix: Solid
Analysis Batch: 478392

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 476754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pb	94.4	103	D	mg/Kg		110	84 - 118

Lab Sample ID: 280-138607-A-1-B MS ^2
Matrix: Solid
Analysis Batch: 478392

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 476754

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pb	63	D	101	171	D	mg/Kg	☼	106	84 - 118

Lab Sample ID: 280-138607-A-1-C MSD ^2
Matrix: Solid
Analysis Batch: 478392

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 476754

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pb	63	D	105	167	D	mg/Kg	☼	99	84 - 118	2	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-478206/12-A
Matrix: Solid
Analysis Batch: 479177

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 478206

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1398	U	0.227	0.228	3.00	0.383	pCi/g	07/31/20 10:48	08/11/20 14:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.1*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*
Y Carrier	*82.6*		*40 - 110*	*07/31/20 10:48*	*08/11/20 14:26*	*1*

Lab Sample ID: LCS 160-478206/1-A
Matrix: Solid
Analysis Batch: 479188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478206

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Strontium-90	7.82	6.857		0.790	3.00	0.351	pCi/g	88	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*79.8*		*40 - 110*
Y Carrier	*82.6*		*40 - 110*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 479188

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478206

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Strontium-90	0.275	U		0.2198	U	0.223	3.00	0.362	pCi/g			0.11	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*73.3*		*40 - 110*
Y Carrier	*81.9*		*40 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-478355/1-A
Matrix: Solid
Analysis Batch: 478973

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 478355

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.004590	U	0.00649	0.00650	1.00	0.0514	pCi/g	08/03/20 11:51	08/06/20 15:13	1
Uranium-238	-0.007362	U	0.00736	0.00739	1.00	0.0492	pCi/g	08/03/20 11:51	08/06/20 15:13	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*102*		*30 - 110*	*08/03/20 11:51*	*08/06/20 15:13*	*1*

Lab Sample ID: LCS 160-478355/2-A
Matrix: Solid
Analysis Batch: 478974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478355

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.494		0.730	1.00	0.0437	pCi/g	102	84 - 120		
Uranium-238			6.51	6.571		0.736	1.00	0.0436	pCi/g	101	82 - 122		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*77.8*		*30 - 110*

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 478976

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478355

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Uranium-235	0.00700	U		0.02666	U	0.0340	1.00	0.0469	pCi/g			0.37	1
Uranium-238	0.281			0.3810		0.115	1.00	0.0519	pCi/g			0.48	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*107*		*30 - 110*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Lab Sample ID: MB 160-478293/1-A
Matrix: Solid
Analysis Batch: 478924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 478293

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.006098	U	0.00704	0.00706	1.00	0.0503	pCi/g	08/03/20 07:45	08/06/20 15:18	1
Plutonium-239/240	-0.004069	U	0.00575	0.00576	1.00	0.0456	pCi/g	08/03/20 07:45	08/06/20 15:18	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.2*		*30 - 110*	*08/03/20 07:45*	*08/06/20 15:18*	*1*

Lab Sample ID: LCS 160-478293/2-A
Matrix: Solid
Analysis Batch: 478925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478293

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.24	4.982		0.575	1.00	0.0552	pCi/g	95	80 - 125
Plutonium-239/240	5.28	4.777		0.556	1.00	0.0376	pCi/g	90	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*96.8*		*30 - 110*

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 478928

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478293

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	RER	RER Limit
Plutonium-238	0.00957	U	-0.004156	U	0.00589	1.00	0.0466	pCi/g	0.48	1
Plutonium-239/240	0.00383	U	-0.006240	U	0.00722	1.00	0.0515	pCi/g	0.43	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*97.0*		*30 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-477440/1-A
Matrix: Solid
Analysis Batch: 479505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477440

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.05015	U	0.133	0.133		0.226	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Cesium-137	-0.002061	U	0.0493	0.0493		0.0965	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Cobalt-60	-0.004701	U	0.0977	0.0977		0.0626	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Europium-152	0.1617		0.122	0.123		0.132	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Europium-154	0.06922	U	0.141	0.141		0.0866	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Europium-155	0.04017	U	0.0972	0.0973		0.249	pCi/g	07/24/20 21:46	08/14/20 09:25	1
Radium-226	0.1055	U	0.0907	0.0913	1.00	0.292	pCi/g	07/24/20 21:46	08/14/20 09:25	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	07/24/20 21:46	08/14/20 09:25	1

Lab Sample ID: LCS 160-477440/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 479501 — **Prep Batch: 477440**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.5	95.61		10.0		1.05	pCi/g	99	87 - 116		
Cesium-137			26.9	26.40		2.81		0.165	pCi/g	98	87 - 120		
Cobalt-60			9.89	9.436		0.989		0.0570	pCi/g	95	87 - 115		

Lab Sample ID: 460-213106-A-4-C DU — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 479505 — **Prep Batch: 477440**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Americium-241	-0.0103	U		-0.1926	U	0.530		0.879	pCi/g			0.21	1
Cesium-137	0.0410	U		-0.1051	U	0.125		0.286	pCi/g			0.56	1
Cobalt-60	-0.0733	U		0.08083	U	0.165		0.185	pCi/g			0.40	1
Europium-152	0.238	U		0.2360	U	0.375		0.415	pCi/g			0	1
Europium-154	0.110	U		0.1999	U	0.323		0.286	pCi/g			0.18	1
Europium-155	0.164	U		0.1715	U	0.455		0.757	pCi/g			0.01	1
Radium-226	3.59			3.317		0.562	1.00	0.319	pCi/g			0.24	1

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Ac-228	4.55			3.450		0.675		0.302	pCi/g			0.76	1
Bi-214	3.59			3.317		0.562		0.319	pCi/g			0.24	1
K-40	5.96			7.418		1.81		0.806	pCi/g			0.41	1
Pb-212	4.07			4.214		0.526		0.185	pCi/g			0.12	1
Pb-214	3.69			3.543		0.518		0.325	pCi/g			0.14	1
Tl-208	1.56			1.444		0.246		0.132	pCi/g			0.22	1

Method: H3-04-RC - Tritium (LSC)

Lab Sample ID: MB 160-478741/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 479123 — **Prep Batch: 478741**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.005908	U	0.276	0.276	1.00	0.491	pCi/g	08/06/20 11:13	08/09/20 13:50	1

Method: H3-04-RC - Tritium (LSC) (Continued)

Lab Sample ID: LCS 160-478741/2-A
Matrix: Solid
Analysis Batch: 479123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478741

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.99	8.280		1.02	1.00	0.497	pCi/g	104	80 - 114		

Lab Sample ID: 160-38687-1 MS
Matrix: Solid
Analysis Batch: 479123

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478741

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	6.05		8.05	11.61	J	1.32	1.00	0.507	pCi/g	69	78 - 122		

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 479123

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478741

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Tritium	6.05			7.804		0.981	1.00	0.495	pCi/g			0.97	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-478071/1-A
Matrix: Solid
Analysis Batch: 479087

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 478071

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.8076	U	1.02	1.02	5.00	1.69	pCi/g	07/30/20 17:08	08/05/20 12:24	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*61.5*		*40 - 110*	*07/30/20 17:08*	*08/05/20 12:24*	*1*

Lab Sample ID: LCS 160-478071/2-A
Matrix: Solid
Analysis Batch: 479087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478071

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.7	22.77		2.86	5.00	1.54	pCi/g	105	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni Carrier	*67.0*		*40 - 110*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 479087

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 478071

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Nickel-63	0.393	U		0.3407	U	1.13	5.00	1.90	pCi/g			0.02	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni Carrier	*53.8*		*40 - 110*

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Lab Sample ID: MB 160-479623/1-A
Matrix: Solid
Analysis Batch: 481136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 479623

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07157	U	0.0651	0.0654	1.00	0.101	pCi/g	08/17/20 14:46	08/28/20 14:50	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
At-217	*34.8*		*30 - 110*	*08/17/20 14:46*	*08/28/20 14:50*	*1*

Lab Sample ID: LCS 160-479623/2-A
Matrix: Solid
Analysis Batch: 481137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 479623

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	11.16		1.06	1.00	0.108	pCi/g	98	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
At-217	*36.4*		*30 - 110*

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 481131

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 479623

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Radium-226	0.424			0.4516		0.0896	1.00	0.0455	pCi/g			0.15	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
At-217	*52.2*		*30 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Metals

Prep Batch: 476754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	3050B	
160-38687-2	HFBR-002-070720	Total/NA	Solid	3050B	
160-38687-3	HFBR-003-070720	Total/NA	Solid	3050B	
160-38687-4	HFBR-004-070720	Total/NA	Solid	3050B	
160-38687-5	HFBR-005-070820	Total/NA	Solid	3050B	
160-38687-6	HFBR-006-070820	Total/NA	Solid	3050B	
160-38687-7	HFBR-007-070820	Total/NA	Solid	3050B	
160-38687-8	HFBR-008-070820	Total/NA	Solid	3050B	
160-38687-9	HFBR-009-070820	Total/NA	Solid	3050B	
MB 160-476754/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 160-476754/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
280-138607-A-1-B MS ^2	Matrix Spike	Total/NA	Solid	3050B	
280-138607-A-1-C MSD ^2	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 478392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	6020B	476754
160-38687-2	HFBR-002-070720	Total/NA	Solid	6020B	476754
160-38687-3	HFBR-003-070720	Total/NA	Solid	6020B	476754
160-38687-4	HFBR-004-070720	Total/NA	Solid	6020B	476754
160-38687-5	HFBR-005-070820	Total/NA	Solid	6020B	476754
160-38687-6	HFBR-006-070820	Total/NA	Solid	6020B	476754
160-38687-7	HFBR-007-070820	Total/NA	Solid	6020B	476754
160-38687-8	HFBR-008-070820	Total/NA	Solid	6020B	476754
160-38687-9	HFBR-009-070820	Total/NA	Solid	6020B	476754
MB 160-476754/1-A ^2	Method Blank	Total/NA	Solid	6020B	476754
LCS 160-476754/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	476754
280-138607-A-1-B MS ^2	Matrix Spike	Total/NA	Solid	6020B	476754
280-138607-A-1-C MSD ^2	Matrix Spike Duplicate	Total/NA	Solid	6020B	476754

General Chemistry

Analysis Batch: 477659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	Moisture	
160-38687-2	HFBR-002-070720	Total/NA	Solid	Moisture	
160-38687-3	HFBR-003-070720	Total/NA	Solid	Moisture	
160-38687-4	HFBR-004-070720	Total/NA	Solid	Moisture	
160-38687-5	HFBR-005-070820	Total/NA	Solid	Moisture	
160-38687-6	HFBR-006-070820	Total/NA	Solid	Moisture	
160-38687-7	HFBR-007-070820	Total/NA	Solid	Moisture	
160-38687-8	HFBR-008-070820	Total/NA	Solid	Moisture	
160-38687-9	HFBR-009-070820	Total/NA	Solid	Moisture	
160-38867-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Rad

Pre Prep Batch: 476436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-213106-A-4-C DU	Duplicate	Total/NA	Solid	Pulverize	

Rad

Pre Prep Batch: 477286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	Pulverize	
160-38687-2	HFBR-002-070720	Total/NA	Solid	Pulverize	
160-38687-3	HFBR-003-070720	Total/NA	Solid	Pulverize	
160-38687-4	HFBR-004-070720	Total/NA	Solid	Pulverize	
160-38687-5	HFBR-005-070820	Total/NA	Solid	Pulverize	
160-38687-6	HFBR-006-070820	Total/NA	Solid	Pulverize	
160-38687-7	HFBR-007-070820	Total/NA	Solid	Pulverize	
160-38687-8	HFBR-008-070820	Total/NA	Solid	Pulverize	
160-38687-9	HFBR-009-070820	Total/NA	Solid	Pulverize	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	Pulverize	

Prep Batch: 477440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	Fill_Geo-21	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	Fill_Geo-21	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	Fill_Geo-21	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	Fill_Geo-21	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	Fill_Geo-21	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	Fill_Geo-21	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	Fill_Geo-21	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	Fill_Geo-21	477286
160-38687-9	HFBR-009-070820	Total/NA	Solid	Fill_Geo-21	477286
MB 160-477440/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-477440/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
460-213106-A-4-C DU	Duplicate	Total/NA	Solid	Fill_Geo-21	476436

Prep Batch: 478071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	Ext_Chrom_LSC	477286
160-38687-9	HFBR-009-070820	Total/NA	Solid	Ext_Chrom_LSC	477286
MB 160-478071/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-478071/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	Ext_Chrom_LSC	477286

Prep Batch: 478206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	DPS-7	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	DPS-7	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	DPS-7	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	DPS-7	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	DPS-7	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	DPS-7	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	DPS-7	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	DPS-7	477286

Rad (Continued)

Prep Batch: 478206 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-9	HFBR-009-070820	Total/NA	Solid	DPS-7	477286
MB 160-478206/12-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-478206/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	DPS-7	477286

Prep Batch: 478293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	ExtChrom	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	ExtChrom	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	ExtChrom	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	ExtChrom	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	ExtChrom	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	ExtChrom	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	ExtChrom	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	ExtChrom	477286
160-38687-9	HFBR-009-070820	Total/NA	Solid	ExtChrom	477286
MB 160-478293/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-478293/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	ExtChrom	477286

Prep Batch: 478355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	ExtChrom	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	ExtChrom	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	ExtChrom	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	ExtChrom	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	ExtChrom	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	ExtChrom	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	ExtChrom	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	ExtChrom	477286
160-38687-9	HFBR-009-070820	Total/NA	Solid	ExtChrom	477286
MB 160-478355/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-478355/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	ExtChrom	477286

Prep Batch: 478741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-2	HFBR-002-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-3	HFBR-003-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-4	HFBR-004-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-5	HFBR-005-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-6	HFBR-006-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-7	HFBR-007-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-8	HFBR-008-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-9	HFBR-009-070820	Total/NA	Solid	LSC_Dist_Susp	
MB 160-478741/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-478741/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-38687-1 MS	HFBR-001-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	LSC_Dist_Susp	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Rad

Prep Batch: 479623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	DPS-0	477286
160-38687-2	HFBR-002-070720	Total/NA	Solid	DPS-0	477286
160-38687-3	HFBR-003-070720	Total/NA	Solid	DPS-0	477286
160-38687-4	HFBR-004-070720	Total/NA	Solid	DPS-0	477286
160-38687-5	HFBR-005-070820	Total/NA	Solid	DPS-0	477286
160-38687-6	HFBR-006-070820	Total/NA	Solid	DPS-0	477286
160-38687-7	HFBR-007-070820	Total/NA	Solid	DPS-0	477286
160-38687-8	HFBR-008-070820	Total/NA	Solid	DPS-0	477286
160-38687-9	HFBR-009-070820	Total/NA	Solid	DPS-0	477286
MB 160-479623/1-A	Method Blank	Total/NA	Solid	DPS-0	
LCS 160-479623/2-A	Lab Control Sample	Total/NA	Solid	DPS-0	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	DPS-0	477286

Organic Prep

Analysis Batch: 476622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	Part Size Red	
160-38687-2	HFBR-002-070720	Total/NA	Solid	Part Size Red	
160-38687-3	HFBR-003-070720	Total/NA	Solid	Part Size Red	
160-38687-4	HFBR-004-070720	Total/NA	Solid	Part Size Red	
160-38687-5	HFBR-005-070820	Total/NA	Solid	Part Size Red	
160-38687-6	HFBR-006-070820	Total/NA	Solid	Part Size Red	
160-38687-7	HFBR-007-070820	Total/NA	Solid	Part Size Red	
160-38687-8	HFBR-008-070820	Total/NA	Solid	Part Size Red	
160-38687-9	HFBR-009-070820	Total/NA	Solid	Part Size Red	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-38687-1	HFBR-001-070720	56.0	86.4
160-38687-1 DU	HFBR-001-070720	73.3	81.9
160-38687-2	HFBR-002-070720	79.5	80.0
160-38687-3	HFBR-003-070720	82.6	82.2
160-38687-4	HFBR-004-070720	76.2	83.0
160-38687-5	HFBR-005-070820	74.8	82.2
160-38687-6	HFBR-006-070820	79.6	83.4
160-38687-7	HFBR-007-070820	80.9	80.4
160-38687-8	HFBR-008-070820	78.1	76.6
160-38687-9	HFBR-009-070820	69.6	75.1
LCS 160-478206/1-A	Lab Control Sample	79.8	82.6
MB 160-478206/12-A	Method Blank	75.1	82.6

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-38687-1	HFBR-001-070720	107
160-38687-1 DU	HFBR-001-070720	97.0
160-38687-2	HFBR-002-070720	104
160-38687-3	HFBR-003-070720	90.4
160-38687-4	HFBR-004-070720	110
160-38687-5	HFBR-005-070820	106
160-38687-6	HFBR-006-070820	86.7
160-38687-7	HFBR-007-070820	84.6
160-38687-8	HFBR-008-070820	84.4
160-38687-9	HFBR-009-070820	83.3
LCS 160-478293/2-A	Lab Control Sample	96.8
MB 160-478293/1-A	Method Blank	87.2

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-38687-1	HFBR-001-070720	104
160-38687-1 DU	HFBR-001-070720	107
160-38687-2	HFBR-002-070720	98.0
160-38687-3	HFBR-003-070720	101
160-38687-4	HFBR-004-070720	88.0
160-38687-5	HFBR-005-070820	84.4

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-38687-6	HFBR-006-070820	87.2
160-38687-7	HFBR-007-070820	91.8
160-38687-8	HFBR-008-070820	91.2
160-38687-9	HFBR-009-070820	95.0
LCS 160-478355/2-A	Lab Control Sample	77.8
MB 160-478355/1-A	Method Blank	102

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-38687-1	HFBR-001-070720	58.3
160-38687-1 DU	HFBR-001-070720	53.8
160-38687-2	HFBR-002-070720	63.1
160-38687-3	HFBR-003-070720	64.1
160-38687-4	HFBR-004-070720	63.5
160-38687-5	HFBR-005-070820	59.0
160-38687-6	HFBR-006-070820	61.5
160-38687-7	HFBR-007-070820	60.0
160-38687-8	HFBR-008-070820	68.0
160-38687-9	HFBR-009-070820	63.0
LCS 160-478071/2-A	Lab Control Sample	67.0
MB 160-478071/1-A	Method Blank	61.5

Tracer/Carrier Legend

Ni = Ni Carrier

Method: ST-RC-0301 - Radium-226 (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	At-217 (30-110)
160-38687-1	HFBR-001-070720	42.9
160-38687-1 DU	HFBR-001-070720	52.2
160-38687-2	HFBR-002-070720	52.2
160-38687-3	HFBR-003-070720	51.7
160-38687-4	HFBR-004-070720	52.5
160-38687-5	HFBR-005-070820	59.2
160-38687-6	HFBR-006-070820	63.1
160-38687-7	HFBR-007-070820	50.2
160-38687-8	HFBR-008-070820	53.7
160-38687-9	HFBR-009-070820	53.7
LCS 160-479623/2-A	Lab Control Sample	36.4
MB 160-479623/1-A	Method Blank	34.8

Tracer/Carrier Legend

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-1
SDG: 160-38687-1

At-217 = At-217

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-38687-2
Laboratory Sample Delivery Group: 160-38687-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
9/24/2020 4:37:33 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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

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

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Job ID: 160-38687-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-38687-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 7/15/2020 9:03 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 26.4º C.

CARBON-14 BY LSC

Job ID: 160-38687-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8) and HFBR-009-070820 (160-38687-9) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/14/2020 and analyzed on 09/17/2020.

Preparation Batch 160-482415:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix. The samples contained concrete pieces and were prepared as received: HFBR-001-070720 (160-38687-1), HFBR-002-070720 (160-38687-2), HFBR-003-070720 (160-38687-3), HFBR-004-070720 (160-38687-4), HFBR-005-070820 (160-38687-5), HFBR-006-070820 (160-38687-6), HFBR-007-070820 (160-38687-7), HFBR-008-070820 (160-38687-8), HFBR-009-070820 (160-38687-9), (160-38687-B-1 DU), and (160-38687-A-2 MS).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: None	Date:	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier:	1 of 1 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: BNL
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below _____			Walk-in Client:
Project Name: BNL 705 Srtack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☑ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: standard library	Ra-226 (Alpha Spectrometry)	Plutonium-238 and 239/240 (Alpha	Uranium-235 and 238 (Alpha Spec	Tritium (LSC)	Strontium-90 (GFPC)	Total Lead (ICP/MS)	Nickel-63(LSC)	Percent Moisture								Sample Specific Notes:
HFBR-001-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-002-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-003-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-004-070720	7-Jul	1130	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-005-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-006-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-007-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-008-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
HFBR-009-070820	8-Jul	1530	C	S	4	N	N	x	x	x	x	x	x	x	x	x								composite sample (1-4)
				S	4	N	N																	
				S	4	N	N																	
				S	4	N	N																	

160-38687 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Please Contact Mike Plonski @ 860-794-6915 upon receipt at the lab. Please Contact Mike Winters @ 352-610-2150 with analytical results.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by: FOSTER	Company: Brookhaven National Lab	Date/Time: 7/13/20 1505	Received by: Steven Woodburn	Company: BNL	Date/Time: 7/13/20 1506
Relinquished by: Steven Woodburn SWW	Company: BNL	Date/Time: 7/14/20 14:00	Received by: FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received in Laboratory by:	Company: ETA STL	Date/Time: JUL 15 2020 0903

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-38687-2
SDG Number: 160-38687-2

Login Number: 38687
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Samples were received at roughly 4000 CPM > background. EHS was notified of
The cooler's custody seal, if present, is intact.	True	incoming samples prior to their arrival.
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Method	Method Description	Protocol	Laboratory
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

EERF = EERF

None = None

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38687-1	HFBR-001-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-2	HFBR-002-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-3	HFBR-003-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-4	HFBR-004-070720	Solid	07/07/20 11:30	07/15/20 09:03	
160-38687-5	HFBR-005-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-6	HFBR-006-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-7	HFBR-007-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-8	HFBR-008-070820	Solid	07/08/20 15:30	07/15/20 09:03	
160-38687-9	HFBR-009-070820	Solid	07/08/20 15:30	07/15/20 09:03	

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Client Sample ID: HFBR-001-070720
Lab Sample ID: 160-38687-1
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.551	U	1.00	1.00	5.00	1.68	pCi/g	09/14/20 12:58	09/17/20 12:49	1

Client Sample ID: HFBR-002-070720
Lab Sample ID: 160-38687-2
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0223	U	0.953	0.953	5.00	1.66	pCi/g	09/14/20 12:58	09/17/20 13:35	1

Client Sample ID: HFBR-003-070720
Lab Sample ID: 160-38687-3
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.423	U	0.983	0.985	5.00	1.66	pCi/g	09/14/20 12:58	09/17/20 14:20	1

Client Sample ID: HFBR-004-070720
Lab Sample ID: 160-38687-4
Date Collected: 07/07/20 11:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.540	U	0.972	0.974	5.00	1.63	pCi/g	09/14/20 12:58	09/17/20 14:42	1

Client Sample ID: HFBR-005-070820
Lab Sample ID: 160-38687-5
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	**24.8**		1.95	3.31	5.00	1.64	pCi/g	09/14/20 12:58	09/17/20 15:05	1

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Client Sample ID: HFBR-006-070820
Lab Sample ID: 160-38687-6
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	37.1		2.32	4.63	5.00	1.67	pCi/g	09/14/20 12:58	09/17/20 15:28	1

Client Sample ID: HFBR-007-070820
Lab Sample ID: 160-38687-7
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	31.5		2.18	4.04	5.00	1.69	pCi/g	09/14/20 12:58	09/17/20 15:50	1

Client Sample ID: HFBR-008-070820
Lab Sample ID: 160-38687-8
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	35.5		2.27	4.45	5.00	1.66	pCi/g	09/14/20 12:58	09/17/20 16:13	1

Client Sample ID: HFBR-009-070820
Lab Sample ID: 160-38687-9
Date Collected: 07/08/20 15:30
Matrix: Solid
Date Received: 07/15/20 09:03

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	43.5		2.46	5.30	5.00	1.65	pCi/g	09/14/20 12:58	09/17/20 16:35	1

QC Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-482415/1-A
Matrix: Solid
Analysis Batch: 482942

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482415

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.9459	U	1.03	1.03	5.00	1.69	pCi/g	09/14/20 12:58	09/17/20 12:04	1

Lab Sample ID: LCS 160-482415/2-A
Matrix: Solid
Analysis Batch: 482942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482415

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	83.11		9.56	5.00	1.67	pCi/g	98	75 - 125		

Lab Sample ID: 160-38687-2 MS
Matrix: Solid
Analysis Batch: 482942

Client Sample ID: HFBR-002-070720
Prep Type: Total/NA
Prep Batch: 482415

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.0223	U	83.5	70.69		8.22	5.00	1.66	pCi/g	85	29 - 128		

Lab Sample ID: 160-38687-1 DU
Matrix: Solid
Analysis Batch: 482942

Client Sample ID: HFBR-001-070720
Prep Type: Total/NA
Prep Batch: 482415

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Carbon-14	0.551	U		0.2412	U	0.976	5.00	1.67	pCi/g			0.16	1

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-38687-2
SDG: 160-38687-2

Rad

Prep Batch: 482415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38687-1	HFBR-001-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-2	HFBR-002-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-3	HFBR-003-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-4	HFBR-004-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-5	HFBR-005-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-6	HFBR-006-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-7	HFBR-007-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-8	HFBR-008-070820	Total/NA	Solid	LSC_Dist_Susp	
160-38687-9	HFBR-009-070820	Total/NA	Solid	LSC_Dist_Susp	
MB 160-482415/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-482415/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-38687-2 MS	HFBR-002-070720	Total/NA	Solid	LSC_Dist_Susp	
160-38687-1 DU	HFBR-001-070720	Total/NA	Solid	LSC_Dist_Susp	

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-38495-1
Client Project/Site: BNL Decommissioning Project

For:
Cabrera Services
50 Founders Plaza
Suite 207
East Hartford, Connecticut 06108

Attn: Mike Plonski



Authorized for release by:
7/17/2020 2:55:16 PM
Jayna Awalt, Project Manager II
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Designee for

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

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

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Job ID: 160-38495-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: Cabrera Services

Project: BNL Decommissioning Project

Report Number: 160-38495-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 06/24/2020; the samples arrived in good condition, properly preserved. The temperature of the coolers at receipt was 23.6° C.

Receipt Exceptions

Job ID: 160-38495-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The container for the following sample was received empty: HFBR-019-061820 (160-38495-19). Nickel-63 analysis has been cancelled.

TRITIUM

Samples HFBR-001-061820 (160-38495-1), HFBR-002-061820 (160-38495-2), HFBR-003-061820 (160-38495-3), HFBR-004-061820 (160-38495-4), HFBR-005-061820 (160-38495-5), HFBR-006-061820 (160-38495-6), HFBR-007-061820 (160-38495-7), HFBR-008-061820 (160-38495-8), HFBR-009-061820 (160-38495-9), HFBR-010-061820 (160-38495-10), HFBR-011-061820 (160-38495-11), HFBR-012-061820 (160-38495-12), HFBR-013-061820 (160-38495-13), HFBR-014-061820 (160-38495-14), HFBR-015-061820 (160-38495-15), HFBR-016-061820 (160-38495-16), HFBR-017-061820 (160-38495-17), HFBR-018-061820 (160-38495-18), HFBR-019-061820 (160-38495-19) and HFBR-020-061820 (160-38495-20) were analyzed for Tritium in accordance with EPA 906.0. The samples were prepared on 07/01/2020 and analyzed on 07/08/2020.

A sample duplicate (DU) and matrix spike (MS) were not run with the batch due to the filter matrix (no sample available). A laboratory sample duplicate (LCSD) was run to demonstrate replicate precision and give added evidence of method performance. HFBR-001-061820 (160-38495-1), HFBR-002-061820 (160-38495-2), HFBR-003-061820 (160-38495-3), HFBR-004-061820 (160-38495-4), HFBR-005-061820 (160-38495-5), HFBR-006-061820 (160-38495-6), HFBR-007-061820 (160-38495-7), HFBR-008-061820 (160-38495-8), HFBR-009-061820 (160-38495-9), HFBR-010-061820 (160-38495-10), HFBR-011-061820 (160-38495-11), HFBR-012-061820 (160-38495-12), HFBR-013-061820 (160-38495-13), HFBR-014-061820 (160-38495-14), HFBR-015-061820 (160-38495-15), HFBR-016-061820 (160-38495-16), HFBR-017-061820 (160-38495-17), HFBR-018-061820 (160-38495-18), HFBR-019-061820 (160-38495-19), HFBR-020-061820 (160-38495-20), (LCS 160-475077/2-A), (LCSD 160-475077/3-A) and (MB 160-475077/1-A)

Samples 160-38495-2, 160-38495-9, 160-38495-20 had two filters per bag. Samples 160-38495-3, 160-38495-9, 160-38495-16, 160-38495-18, 160-38495-20 turned green after the addition of Potassium Permanganate.

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

NICKEL 59/63 (LSC)

Samples HFBR-001-061820 (160-38495-1), HFBR-002-061820 (160-38495-2), HFBR-003-061820 (160-38495-3), HFBR-004-061820 (160-38495-4), HFBR-005-061820 (160-38495-5), HFBR-006-061820 (160-38495-6), HFBR-007-061820 (160-38495-7), HFBR-008-061820 (160-38495-8), HFBR-009-061820 (160-38495-9), HFBR-010-061820 (160-38495-10), HFBR-011-061820 (160-38495-11), HFBR-012-061820 (160-38495-12), HFBR-013-061820 (160-38495-13), HFBR-014-061820 (160-38495-14), HFBR-015-061820 (160-38495-15), HFBR-016-061820 (160-38495-16), HFBR-017-061820 (160-38495-17), HFBR-018-061820 (160-38495-18) and HFBR-020-061820 (160-38495-20) were analyzed for Nickel 59/63 (LSC) in accordance with LSC-Nickel. The samples were prepared on 07/09/2020 and analyzed on 07/14/2020 and 07/15/2020.

Insufficient sample volume was available to perform a sample duplicate (DUP) associated with preparation batch 160-475945. A laboratory control sample/laboratory control sample duplicate(LCS/LCSD) were prepared instead to demonstrate batch precision.

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

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215243

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

M. Pionski

Client Contact	Project Manager: ROB FRANK	Site Contact: ~~NONE~~	Date: 6.18.2020	COC No:
Company Name: CABRERA Services	Tel/Fax: 937-479-3468	Lab Contact: IVAN VANIA	Carrier:	____ of ____ COCs
Address: 50 FOUNDER WAY STE 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT, 06108	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven NATL LAB	☒ 1 week			
Site: 705 STACK DEMO	☐ 2 days			Job / SDG No.:
PO # 1085-20-01-01&A	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	Sample Specific Notes:
HFBR-001-061820	6/18/20	1400		WET SMEAR				X	X	2x = H3, N63
HFBR-002-061820								X	X	
HFBR-003-061820								X	X	
HFBR-004-061820								X	X	
HFBR-005-061820								X	X	
HFBR-006-061820								X	X	
HFBR-007-061820								X	X	
HFBR-008-061820								X	X	
HFBR-009-061820								X	X	
HFBR-010-061820								X	X	
HFBR-011-061820								X	X	
HFBR-012-061820								X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Waters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] Bennett	Cabrera Services	6/19/20	[signature] Foster	BNL	6/19/2020 0930
[signature] Foster	BNL	6/22/2020 0940	[signature]	BNL	6/22/2020 0940
[signature] FEDEX	BNL	6/22/2020 1400	Received in Laboratory by: FEDEX	Company:	Date/Time:

Michael Cunningham ETA STL 6/24/2020 13:15

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7/17/2020

160-38495 Chain of Custody

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215244

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Rob Frank	Site Contact: M. Plonski	Date: 6.18.2020	COC No:
Company Name: Cabrera Services	Tel/Fax:	Lab Contact: Evan Viola	Carrier:	____ of ____ COCs
Address: 50 Founders Plaza Ste 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. Hartford, CT 06108	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven Natl Labs	☒ 1 week			
Site: 705 Stack Demo	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	GAMMA SPEC	ISO-U	Alpha SPEC Sr-90	Sample Specific Notes:
HFBR-013-061820	6/18/20	1400		(WIPE (WET)				X	X				2X = 1(H3) + 1(Ni63)
HFBR-014-061820								X	X				
HFBR-015-061820								X	X				
HFBR-016-061820								X	X				
HFBR-017-061820								X	X				
HFBR-018-061820								X	X				
HFBR-019-061820								X	X				
HFBR-020-061820								X	X				
HFBR-D007-061820										X	X	X	DRY WIPES
HFBR-D007A-061820										X	X	X	
HFBR-D008-061820										X	X	X	
HFBR-D008A-061820										X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Derek Bond	Cabrera Services	6/19/20	FOSTER	BNL	6/19/2020 0930
FOSTER	BNL	6/22/2020 0940	Theodore D Heron	BNL	6/22/2020 0940
Theodore D Heron	BNL	6/22/2020 NOON	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Michael Cunningham TDA STL 6/24/2020 13:15

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7/1/2020

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215245

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: M. PLOSKI	Date: 6.18.20	COC No:
Company Name: CABRERA SERVICES	Tel/Fax:	Lab Contact: JOAN VANCA	Carrier:	____ of ____ COCs
Address: 50 FOUNDERS Plaza Ste 201	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT 06108	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: BROOKHAVEN NATIONAL LAB	☒ 1 week			
Site: 705 STACK BLDG	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec	FSO-GL	Alpha Spec Sr-90	Sample Specific Notes:
HFBR-D009-061820	6/18/20			DRY WIPE				X	X	X	DRY WIPES
HFBR-D009A-061820				↓				X	X	X	↓
HFBR-D020-061820								X	X	X	
HFBR-D020A-061820								X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Wes Beard	Cabrera Services	6/19/20	FOSTER	BNL	6/19/2020 0930
FOSTER	BNL	6/22/2020 0940	Theodore G. Heuer	BNL	6/22/2020 0940
Theodore G. Heuer	BNL	6/22/2020 1400	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Micha Konishiya ETA STL 6/24/2020 13:15

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Login Sample Receipt Checklist

Client: Cabrera Services

Job Number: 160-38495-1

Login Number: 38495
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: Cabrera Services
Job ID: 160-38495-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Method	Method Description	Protocol	Laboratory
906.0	Tritium, Total (LSC)	EPA	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

Sample Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38495-1	HFBR-001-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-2	HFBR-002-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-3	HFBR-003-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-4	HFBR-004-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-5	HFBR-005-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-6	HFBR-006-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-7	HFBR-007-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-8	HFBR-008-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-9	HFBR-009-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-10	HFBR-010-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-11	HFBR-011-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-12	HFBR-012-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-13	HFBR-013-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-14	HFBR-014-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-15	HFBR-015-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-16	HFBR-016-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-17	HFBR-017-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-18	HFBR-018-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-19	HFBR-019-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-20	HFBR-020-061820	Filter	06/18/20 14:00	06/24/20 13:15	

Client Sample ID: HFBR-001-061820
Lab Sample ID: 160-38495-1
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	2.88	U	7.64	7.64	15.0	13.2	pCi/Sample	07/01/20 17:56	07/08/20 11:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.32	1.32	5.00	2.21	pCi/Sample	07/09/20 14:59	07/14/20 18:02	1
Nickel-63	0.714	U	1.47	1.48	5.00	2.47	pCi/Sample	07/09/20 14:59	07/14/20 18:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*76.5*		*40 - 110*	*07/09/20 14:59*	*07/14/20 18:02*	*1*

Client Sample ID: HFBR-002-061820
Lab Sample ID: 160-38495-2
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-3.06	U	7.02	7.03	15.0	13.1	pCi/Sample	07/01/20 17:56	07/08/20 11:24	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.20	1.20	5.00	2.01	pCi/Sample	07/09/20 14:59	07/14/20 19:41	1
Nickel-63	1.45	U	1.39	1.39	5.00	2.27	pCi/Sample	07/09/20 14:59	07/14/20 19:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*83.5*		*40 - 110*	*07/09/20 14:59*	*07/14/20 19:41*	*1*

Client Sample ID: HFBR-003-061820
Lab Sample ID: 160-38495-3
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-2.14	U	7.05	7.05	15.0	12.9	pCi/Sample	07/01/20 17:56	07/08/20 11:47	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.25	1.25	5.00	2.08	pCi/Sample	07/09/20 14:59	07/14/20 21:19	1
Nickel-63	0.228	U	1.41	1.41	5.00	2.40	pCi/Sample	07/09/20 14:59	07/14/20 21:19	1

Client Sample ID: HFBR-003-061820
Lab Sample ID: 160-38495-3
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	79.5		40 - 110	07/09/20 14:59	07/14/20 21:19	1

Client Sample ID: HFBR-004-061820
Lab Sample ID: 160-38495-4
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.000	U	7.25	7.25	15.0	12.9	pCi/Sample	07/01/20 17:56	07/08/20 12:09	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.21	1.21	5.00	2.16	pCi/Sample	07/09/20 14:59	07/14/20 22:58	1
Nickel-63	0.422	U	1.46	1.46	5.00	2.47	pCi/Sample	07/09/20 14:59	07/14/20 22:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	77.0		40 - 110	07/09/20 14:59	07/14/20 22:58	1

Client Sample ID: HFBR-005-061820
Lab Sample ID: 160-38495-5
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.541	U	7.26	7.26	15.0	12.8	pCi/Sample	07/01/20 17:56	07/08/20 12:32	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.33	1.33	5.00	2.31	pCi/Sample	07/09/20 14:59	07/15/20 00:37	1
Nickel-63	1.25	U	1.58	1.58	5.00	2.62	pCi/Sample	07/09/20 14:59	07/15/20 00:37	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	72.5		40 - 110	07/09/20 14:59	07/15/20 00:37	1

Client Sample ID: HFBR-006-061820
Lab Sample ID: 160-38495-6
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-2.07	U	7.06	7.06	15.0	12.9	pCi/Sample	07/01/20 17:56	07/08/20 12:54	1

Client Sample ID: HFBR-006-061820

Lab Sample ID: 160-38495-6

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.77	1.77	5.00	2.95	pCi/Sample	07/09/20 14:59	07/15/20 02:16	1
Nickel-63	2.56	U	2.05	2.07	5.00	3.33	pCi/Sample	07/09/20 14:59	07/15/20 02:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*57.0*		*40 - 110*	*07/09/20 14:59*	*07/15/20 02:16*	*1*

Client Sample ID: HFBR-007-061820

Lab Sample ID: 160-38495-7

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.360	U	7.53	7.53	15.0	13.5	pCi/Sample	07/01/20 17:56	07/08/20 13:17	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.52	1.52	5.00	2.30	pCi/Sample	07/09/20 14:59	07/15/20 03:55	1
Nickel-63	**4.53**		1.76	1.82	5.00	2.71	pCi/Sample	07/09/20 14:59	07/15/20 03:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*71.0*		*40 - 110*	*07/09/20 14:59*	*07/15/20 03:55*	*1*

Client Sample ID: HFBR-008-061820

Lab Sample ID: 160-38495-8

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	5.05	U	8.01	8.02	15.0	13.6	pCi/Sample	07/01/20 17:56	07/08/20 13:40	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.37	1.37	5.00	2.18	pCi/Sample	07/09/20 14:59	07/15/20 05:33	1
Nickel-63	1.70	U	1.58	1.59	5.00	2.59	pCi/Sample	07/09/20 14:59	07/15/20 05:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*74.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 05:33*	*1*

Client Sample ID: HFBR-009-061820
Lab Sample ID: 160-38495-9
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	10.3	U	8.18	8.23	15.0	12.9	pCi/Sample	07/01/20 17:56	07/08/20 14:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.35	1.35	5.00	2.33	pCi/Sample	07/09/20 14:59	07/15/20 07:12	1
Nickel-63	0.928	U	1.62	1.63	5.00	2.72	pCi/Sample	07/09/20 14:59	07/15/20 07:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*70.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 07:12*	*1*

Client Sample ID: HFBR-010-061820
Lab Sample ID: 160-38495-10
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	4.14	U	7.62	7.62	15.0	12.9	pCi/Sample	07/01/20 17:56	07/08/20 14:25	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.25	1.25	5.00	2.09	pCi/Sample	07/09/20 14:59	07/15/20 08:51	1
Nickel-63	0.178	U	1.42	1.42	5.00	2.42	pCi/Sample	07/09/20 14:59	07/15/20 08:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*79.0*		*40 - 110*	*07/09/20 14:59*	*07/15/20 08:51*	*1*

Client Sample ID: HFBR-011-061820
Lab Sample ID: 160-38495-11
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.721	U	7.47	7.47	15.0	13.3	pCi/Sample	07/01/20 17:59	07/08/20 14:48	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.21	1.21	5.00	2.04	pCi/Sample	07/09/20 14:59	07/15/20 10:30	1
Nickel-63	1.24	U	1.36	1.37	5.00	2.24	pCi/Sample	07/09/20 14:59	07/15/20 10:30	1

Client Sample ID: HFBR-011-061820
Lab Sample ID: 160-38495-11
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	84.0		40 - 110	07/09/20 14:59	07/15/20 10:30	1

Client Sample ID: HFBR-012-061820
Lab Sample ID: 160-38495-12
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	1.62	U	7.57	7.57	15.0	13.3	pCi/Sample	07/01/20 17:59	07/08/20 15:11	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.502	U	1.27	1.27	5.00	2.04	pCi/Sample	07/09/20 14:59	07/15/20 12:09	1
Nickel-63	0.138	U	1.37	1.37	5.00	2.34	pCi/Sample	07/09/20 14:59	07/15/20 12:09	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	81.5		40 - 110	07/09/20 14:59	07/15/20 12:09	1

Client Sample ID: HFBR-013-061820
Lab Sample ID: 160-38495-13
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.721	U	7.54	7.54	15.0	13.5	pCi/Sample	07/01/20 17:59	07/08/20 15:33	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.34	1.34	5.00	2.23	pCi/Sample	07/09/20 14:59	07/15/20 13:48	1
Nickel-63	0.830	U	1.47	1.47	5.00	2.44	pCi/Sample	07/09/20 14:59	07/15/20 13:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	77.0		40 - 110	07/09/20 14:59	07/15/20 13:48	1

Client Sample ID: HFBR-014-061820
Lab Sample ID: 160-38495-14
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	1.44	U	7.46	7.46	15.0	13.1	pCi/Sample	07/01/20 17:59	07/08/20 15:56	1

Client Sample ID: HFBR-014-061820
Lab Sample ID: 160-38495-14
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.24	1.24	5.00	2.13	pCi/Sample	07/09/20 14:59	07/15/20 15:27	1
Nickel-63	0.0347	U	1.38	1.38	5.00	2.35	pCi/Sample	07/09/20 14:59	07/15/20 15:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*80.0*		*40 - 110*	*07/09/20 14:59*	*07/15/20 15:27*	*1*

Client Sample ID: HFBR-015-061820
Lab Sample ID: 160-38495-15
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.541	U	7.24	7.24	15.0	13.0	pCi/Sample	07/01/20 17:59	07/08/20 16:19	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.28	1.28	5.00	2.18	pCi/Sample	07/09/20 14:59	07/15/20 17:05	1
Nickel-63	0.662	U	1.43	1.43	5.00	2.39	pCi/Sample	07/09/20 14:59	07/15/20 17:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*78.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 17:05*	*1*

Client Sample ID: HFBR-016-061820
Lab Sample ID: 160-38495-16
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-1.03	U	7.49	7.49	15.0	13.7	pCi/Sample	07/01/20 17:59	07/08/20 16:41	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.22	1.22	5.00	2.10	pCi/Sample	07/09/20 14:59	07/15/20 18:44	1
Nickel-63	-0.334	U	1.42	1.42	5.00	2.46	pCi/Sample	07/09/20 14:59	07/15/20 18:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*78.0*		*40 - 110*	*07/09/20 14:59*	*07/15/20 18:44*	*1*

Client Sample ID: HFBR-017-061820
Lab Sample ID: 160-38495-17
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-4.22	U	6.81	6.82	15.0	12.9	pCi/Sample	07/01/20 17:59	07/08/20 17:04	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.28	1.28	5.00	2.17	pCi/Sample	07/09/20 14:59	07/15/20 20:23	1
Nickel-63	0.559	U	1.45	1.46	5.00	2.45	pCi/Sample	07/09/20 14:59	07/15/20 20:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*77.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 20:23*	*1*

Client Sample ID: HFBR-018-061820
Lab Sample ID: 160-38495-18
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.721	U	7.69	7.69	15.0	13.8	pCi/Sample	07/01/20 17:59	07/08/20 17:27	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.13	1.13	5.00	1.96	pCi/Sample	07/09/20 14:59	07/15/20 22:02	1
Nickel-63	-0.0216	U	1.30	1.30	5.00	2.22	pCi/Sample	07/09/20 14:59	07/15/20 22:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*85.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 22:02*	*1*

Client Sample ID: HFBR-019-061820
Lab Sample ID: 160-38495-19
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-2.20	U	6.96	6.96	15.0	12.7	pCi/Sample	07/01/20 17:59	07/08/20 17:49	1

Client Sample Results

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Client Sample ID: HFBR-020-061820

Lab Sample ID: 160-38495-20

Date Collected: 06/18/20 14:00

Matrix: Filter

Date Received: 06/24/20 13:15

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	1.98	U	7.60	7.61	15.0	13.3	pCi/Sample	07/01/20 17:59	07/08/20 18:12	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.39	1.39	5.00	2.17	pCi/Sample	07/09/20 14:59	07/15/20 23:41	1
Nickel-63	2.17	U	1.54	1.56	5.00	2.49	pCi/Sample	07/09/20 14:59	07/15/20 23:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*76.5*		*40 - 110*	*07/09/20 14:59*	*07/15/20 23:41*	*1*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-475077/1-A
Matrix: Filter
Analysis Batch: 475939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475077

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-5.369	U	6.78	6.80	15.0	13.1	pCi/Sample	07/01/20 17:56	07/08/20 09:53	1

Lab Sample ID: LCS 160-475077/2-A
Matrix: Filter
Analysis Batch: 475939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475077

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	244	235.1		28.5	15.0	12.9	pCi/Sam	96	80 - 114

Lab Sample ID: LCSD 160-475077/3-A
Matrix: Filter
Analysis Batch: 475939

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475077

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Tritium	244	247.7		29.8	15.0	13.2	pCi/Sam	101	80 - 114	0.22	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-475945/1-A
Matrix: Filter
Analysis Batch: 476516

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475945

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.0000	U	1.27	1.27	5.00	2.19	pCi/Sample	07/09/20 14:59	07/14/20 13:05	1
Nickel-63	0.07929	U	1.47	1.47	5.00	2.52	pCi/Sample	07/09/20 14:59	07/14/20 13:05	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*75.8*		*40 - 110*	*07/09/20 14:59*	*07/14/20 13:05*	*1*

Lab Sample ID: LCS 160-475945/2-A
Matrix: Filter
Analysis Batch: 476516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475945

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-59	42.1	38.35		6.03	5.00	2.13	pCi/Sam	91	75 - 125
Nickel-63	39.1	36.26		4.57	5.00	2.49	pCi/Sam	93	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni Carrier	*77.2*		*40 - 110*

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCSD 160-475945/3-A
Matrix: Filter
Analysis Batch: 476516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475945

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Nickel-59			42.1	37.06		5.78	5.00	1.93	pCi/Sam	88	75 - 125	0.11	1
Nickel-63			39.1	37.25		4.57	5.00	2.22	pCi/Sam	95	75 - 125	0.11	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ni Carrier	*86.0*		*40 - 110*

QC Association Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Rad

Prep Batch: 475077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-1	HFBR-001-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-2	HFBR-002-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-3	HFBR-003-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-4	HFBR-004-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-5	HFBR-005-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-6	HFBR-006-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-7	HFBR-007-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-8	HFBR-008-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-9	HFBR-009-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-10	HFBR-010-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-11	HFBR-011-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-12	HFBR-012-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-13	HFBR-013-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-14	HFBR-014-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-15	HFBR-015-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-16	HFBR-016-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-17	HFBR-017-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-18	HFBR-018-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-19	HFBR-019-061820	Total/NA	Filter	LSC_Dist_Susp	
160-38495-20	HFBR-020-061820	Total/NA	Filter	LSC_Dist_Susp	
MB 160-475077/1-A	Method Blank	Total/NA	Filter	LSC_Dist_Susp	
LCS 160-475077/2-A	Lab Control Sample	Total/NA	Filter	LSC_Dist_Susp	
LCSD 160-475077/3-A	Lab Control Sample Dup	Total/NA	Filter	LSC_Dist_Susp	

Prep Batch: 475945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-1	HFBR-001-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-2	HFBR-002-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-3	HFBR-003-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-4	HFBR-004-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-5	HFBR-005-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-6	HFBR-006-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-7	HFBR-007-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-8	HFBR-008-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-9	HFBR-009-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-10	HFBR-010-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-11	HFBR-011-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-12	HFBR-012-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-13	HFBR-013-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-14	HFBR-014-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-15	HFBR-015-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-16	HFBR-016-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-17	HFBR-017-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-18	HFBR-018-061820	Total/NA	Filter	Ext_Chrom_LSC	
160-38495-20	HFBR-020-061820	Total/NA	Filter	Ext_Chrom_LSC	
MB 160-475945/1-A	Method Blank	Total/NA	Filter	Ext_Chrom_LSC	
LCS 160-475945/2-A	Lab Control Sample	Total/NA	Filter	Ext_Chrom_LSC	
LCSD 160-475945/3-A	Lab Control Sample Dup	Total/NA	Filter	Ext_Chrom_LSC	

Tracer/Carrier Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Filter

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-38495-1	HFBR-001-061820	76.5						
160-38495-2	HFBR-002-061820	83.5						
160-38495-3	HFBR-003-061820	79.5						
160-38495-4	HFBR-004-061820	77.0						
160-38495-5	HFBR-005-061820	72.5						
160-38495-6	HFBR-006-061820	57.0						
160-38495-7	HFBR-007-061820	71.0						
160-38495-8	HFBR-008-061820	74.5						
160-38495-9	HFBR-009-061820	70.5						
160-38495-10	HFBR-010-061820	79.0						
160-38495-11	HFBR-011-061820	84.0						
160-38495-12	HFBR-012-061820	81.5						
160-38495-13	HFBR-013-061820	77.0						
160-38495-14	HFBR-014-061820	80.0						
160-38495-15	HFBR-015-061820	78.5						
160-38495-16	HFBR-016-061820	78.0						
160-38495-17	HFBR-017-061820	77.5						
160-38495-18	HFBR-018-061820	85.5						
160-38495-20	HFBR-020-061820	76.5						
LCS 160-475945/2-A	Lab Control Sample	77.2						
LCSD 160-475945/3-A	Lab Control Sample Dup	86.0						
MB 160-475945/1-A	Method Blank	75.8						

Tracer/Carrier Legend

Ni = Ni Carrier

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-38495-2
Client Project/Site: BNL Decommissioning Project

For:
Cabrera Services
50 Founders Plaza
Suite 207
East Hartford, Connecticut 06108

Attn: Mike Plonski

Authorized for release by:
7/1/2020 11:31:34 AM

Ivan Vania, Project Manager II
(314)298-8566
ivan.vania@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-38495-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: Cabrera Services

Project: BNL Decommissioning Project

Report Number: 160-38495-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 6/24/2020 1:15 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 23.6º C.

GROSS ALPHA AND GROSS BETA RADIOACTIVITY

Job ID: 160-38495-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples HFBR-D007-061820 (160-38495-21), HFBR-D007A-061820 (160-38495-22), HFBR-D008-061820 (160-38495-23), HFBR-D008A-061820 (160-38495-24), HFBR-D009-061820 (160-38495-25), HFBR-D009A-061820 (160-38495-26), HFBR-D020-061820 (160-38495-27) and HFBR-D020A-061820 (160-38495-28) were analyzed for Gross Alpha and Gross Beta Radioactivity in accordance with EPA 900.0. The samples were prepared on 06/30/2020 and analyzed on 07/01/2020.

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

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215243

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

M. Pionski

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: ~~NONE~~	Date: 6.18.2020	COC No:
Company Name: CABRERA Services	Tel/Fax: 937-479-3468	Lab Contact: IVAN VANIA	Carrier:	____ of ____ COCs
Address: 50 FOUNDER WAY STE 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT, 06108	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven NATL LAB	☒ 1 week			
Site: 705 STACK DEMO	☐ 2 days			Job / SDG No.:
PO # 1085-20-01-01&A	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	Sample Specific Notes:
HFBR-001-061820	6/18/20	1400		WET SMEAR				X	X	2x = H3, N63
HFBR-002-061820								X	X	
HFBR-003-061820								X	X	
HFBR-004-061820								X	X	
HFBR-005-061820								X	X	
HFBR-006-061820								X	X	
HFBR-007-061820								X	X	
HFBR-008-061820								X	X	
HFBR-009-061820								X	X	
HFBR-010-061820								X	X	
HFBR-011-061820								X	X	
HFBR-012-061820								X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Waters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] Bennett	Cabrera Services	6/19/20	[signature] Foster	BNL	6/19/2020 0930
[signature] Foster	BNL	6/22/2020 0940	[signature]	BNL	6/22/2020 0940
[signature] FEDEX	BNL	6/22/2020 1400	Received in Laboratory by: FEDEX	Company:	Date/Time:

Michael Winship ETA STL 6/24/2020 13:15

160-38495 Chain of Custody

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215244

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Rob Frank	Site Contact: M. Plonski	Date: 6.18.2020	COC No:
Company Name: Cabrera Services	Tel/Fax:	Lab Contact: Evan Viola	Carrier:	____ of ____ COCs
Address: 50 Founders Plaza Ste 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. Hartford, CT 06108	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven Natl Labs	☒ 1 week			
Site: 705 Stack Demo	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	GAMMA SPEC	ISO-U	Alpha SPEC Sr-90	Sample Specific Notes:
HFBR-013-061820	6/18/20	1400		(WIPE (WET)				X	X				2X = 1(H3) + 1(Ni63)
HFBR-014-061820								X	X				
HFBR-015-061820								X	X				
HFBR-016-061820								X	X				
HFBR-017-061820								X	X				
HFBR-018-061820								X	X				
HFBR-019-061820								X	X				
HFBR-020-061820								X	X				
HFBR-D007-061820										X	X	X	DRY WIPES
HFBR-D007A-061820										X	X	X	
HFBR-D008-061820										X	X	X	
HFBR-D008A-061820										X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Derek Bond	Cabrera Services	6/19/20	Foster	BNL	6/19/2020 0930
Foster	BNL	6/22/2020 0940	Theodore D'Heron	BNL	6/22/2020 0940
Theodore D'Heron	BNL	6/22/2020 NOON	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Michael Cunningham TAA STL 6/24/2020 13:15

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215245

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: M. PLOSKI	Date: 6.18.20	COC No:
Company Name: CABRERA SERVICES	Tel/Fax:	Lab Contact: JOAN VANCA	Carrier:	____ of ____ COCs
Address: 50 FOUNDERS Plaza Ste 201	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT 06108	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: BROOKHAVEN NATIONAL LAB	☒ 1 week			
Site: 705 STACK BLDG	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec	FSO-GL	Alpha Spec Sr-90	Sample Specific Notes:
HFBR-D009-061820	6/18/20			DRY WIPE				X	X	X	DRY WIPES
HFBR-D009A-061820				↓				X	X	X	↓
HFBR-D020-061820								X	X	X	
HFBR-D020A-061820								X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Wes Bernd	Cabrera Services	6/19/20	FOSTER	BNL	6/19/2020 0930
FOSTER	BNL	6/22/2020 0940	Theodore G. Heuer	BNL	6/22/2020 0940
Theodore G. Heuer	BNL	6/22/2020 1400	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Micha Konishiya ETA STL 6/24/2020 13:15

Login Sample Receipt Checklist

Client: Cabrera Services

Job Number: 160-38495-2

Login Number: 38495
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: Cabrera Services
Job ID: 160-38495-2
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-2

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
None	Direct Addition of Sample	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

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

Sample Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38495-21	HFBR-D007-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-22	HFBR-D007A-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-23	HFBR-D008-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-24	HFBR-D008A-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-25	HFBR-D009-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-26	HFBR-D009A-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-27	HFBR-D020-061820	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-28	HFBR-D020A-061820	Filter	06/18/20 14:00	06/24/20 13:15	

Client Sample ID: HFBR-D007-061820
Lab Sample ID: 160-38495-21
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	5.92		0.838	1.08	10.0	0.308	pCi/Sample	06/30/20 16:29	07/01/20 06:03	1
Gross Beta	226		4.52	23.1	10.0	0.921	pCi/Sample	06/30/20 16:29	07/01/20 06:03	1

Client Sample ID: HFBR-D007A-061820
Lab Sample ID: 160-38495-22
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	2.30		0.524	0.586	10.0	0.271	pCi/Sample	06/30/20 16:29	07/01/20 06:04	1
Gross Beta	67.3		2.51	7.18	10.0	0.662	pCi/Sample	06/30/20 16:29	07/01/20 06:04	1

Client Sample ID: HFBR-D008-061820
Lab Sample ID: 160-38495-23
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	6.52		0.865	1.14	10.0	0.273	pCi/Sample	06/30/20 16:29	07/01/20 06:04	1
Gross Beta	249		4.75	25.3	10.0	0.969	pCi/Sample	06/30/20 16:29	07/01/20 06:04	1

Client Sample ID: HFBR-D008A-061820
Lab Sample ID: 160-38495-24
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	7.87		0.949	1.31	10.0	0.242	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1
Gross Beta	175		4.00	17.9	10.0	1.06	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1

Client Sample ID: HFBR-D009-061820
Lab Sample ID: 160-38495-25
Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	3.42		0.639	0.749	10.0	0.244	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1
Gross Beta	95.5		2.96	10.0	10.0	0.769	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1

Client Sample Results

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-2

Client Sample ID: HFBR-D009A-061820

Lab Sample ID: 160-38495-26

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	3.52		0.647	0.761	10.0	0.254	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1
Gross Beta	130		3.44	13.4	10.0	0.758	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1

Client Sample ID: HFBR-D020-061820

Lab Sample ID: 160-38495-27

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	3.10		0.608	0.703	10.0	0.265	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1
Gross Beta	87.1		2.84	9.17	10.0	0.767	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1

Client Sample ID: HFBR-D020A-061820

Lab Sample ID: 160-38495-28

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	9.80		1.07	1.55	10.0	0.258	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1
Gross Beta	209		4.42	21.4	10.0	1.15	pCi/Sample	06/30/20 16:29	07/01/20 06:05	1

QC Sample Results

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-2

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-474996/1-A
Matrix: Filter
Analysis Batch: 475022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 474996

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.1138	U	0.155	0.155	10.0	0.258	pCi/Sample	06/30/20 16:29	07/01/20 06:03	1
Gross Beta	0.3446	U	0.292	0.294	10.0	0.435	pCi/Sample	06/30/20 16:29	07/01/20 06:03	1

Lab Sample ID: LCS 160-474996/2-A
Matrix: Filter
Analysis Batch: 475022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474996

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha			5.32	4.997		0.958	10.0	0.255	pCi/Sam	94	75 - 125		

Lab Sample ID: LCSB 160-474996/3-A
Matrix: Filter
Analysis Batch: 475022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 474996

Analyte			Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta			25.2	24.22		2.84	10.0	0.433	pCi/Sam	96	75 - 125		

Lab Sample ID: 160-38495-21 DU
Matrix: Filter
Analysis Batch: 475022

Client Sample ID: HFBR-D007-061820
Prep Type: Total/NA
Prep Batch: 474996

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Gross Alpha	5.92			5.579		1.04	10.0	0.375	pCi/Sam			0.16	1
Gross Beta	226			228.4		23.3	10.0	0.931	pCi/Sam			0.04	1

QC Association Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-2

Rad

Prep Batch: 474996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-21	HFBR-D007-061820	Total/NA	Filter	None	
160-38495-22	HFBR-D007A-061820	Total/NA	Filter	None	
160-38495-23	HFBR-D008-061820	Total/NA	Filter	None	
160-38495-24	HFBR-D008A-061820	Total/NA	Filter	None	
160-38495-25	HFBR-D009-061820	Total/NA	Filter	None	
160-38495-26	HFBR-D009A-061820	Total/NA	Filter	None	
160-38495-27	HFBR-D020-061820	Total/NA	Filter	None	
160-38495-28	HFBR-D020A-061820	Total/NA	Filter	None	
MB 160-474996/1-A	Method Blank	Total/NA	Filter	None	
LCS 160-474996/2-A	Lab Control Sample	Total/NA	Filter	None	
LCSB 160-474996/3-A	Lab Control Sample	Total/NA	Filter	None	
160-38495-21 DU	HFBR-D007-061820	Total/NA	Filter	None	

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-38495-3
Client Project/Site: BNL Decommissioning Project

For:
Cabrera Services
50 Founders Plaza
Suite 207
East Hartford, Connecticut 06108

Attn: Mike Plonski

Authorized for release by:
7/7/2020 4:17:57 PM

Ivan Vania, Project Manager II
(314)298-8566
ivan.vania@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-38495-3

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: Cabrera Services

Project: BNL Decommissioning Project

Report Number: 160-38495-3

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 6/24/2020 1:15 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 23.6º C.

Receipt Exceptions

Job ID: 160-38495-3 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples with identical identification prefixes were composited for analysis per client request. The new sample IDs contain "COMP" after the initial prefix: HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31), and HFBR-D020-061820 COMP (160-38495-32).

CESIUM 137 AND OTHER GAMMA EMITTERS (GS)

Samples HFBR-D007-061820 COMP (160-38495-29), HFBR-D008-061820 COMP (160-38495-30), HFBR-D009-061820 COMP (160-38495-31) and HFBR-D020-061820 COMP (160-38495-32) were analyzed for Cesium 137 and Other Gamma Emitters (GS) in accordance with EPA Method 901.1. The samples were prepared on 07/06/2020 and analyzed on 07/07/2020.

Preparation Batch 160-475402:
The sample exhibited a negative result greater in magnitude than the 3 sigma TPU for Th-234. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: HFBR-D008-061820 COMP (160-38495-30).

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

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215243

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

M. Pionski

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: ~~NONE~~	Date: 6.18.2020	COC No:
Company Name: CABRERA Services	Tel/Fax: 937-479-3468	Lab Contact: IVAN VANIA	Carrier:	____ of ____ COCs
Address: 50 FOUNDER WAY STE 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT, 06108	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven NATL LAB	☒ 1 week			
Site: 705 STACK DEMO	☐ 2 days			Job / SDG No.:
PO # 1085-20-01-01&A	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	Sample Specific Notes:
HFBR-001-061820	6/18/20	1400		WET SMEAR				X	X	2x = H3, N63
HFBR-002-061820								X	X	
HFBR-003-061820								X	X	
HFBR-004-061820								X	X	
HFBR-005-061820								X	X	
HFBR-006-061820								X	X	
HFBR-007-061820								X	X	
HFBR-008-061820								X	X	
HFBR-009-061820								X	X	
HFBR-010-061820								X	X	
HFBR-011-061820								X	X	
HFBR-012-061820								X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Waters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] Bennett	Cabrera Services	6/19/20	[signature] Foster	BNL	6/19/2020 0930
[signature] Foster	BNL	6/22/2020 0940	[signature]	BNL	6/22/2020 0940
[signature]	BNL	6/22/2020 1400	Received in Laboratory by: FEDEX	Company:	Date/Time:

FEDEX

Michael Winship ETA STL 6/24/2020 13:15

160-38495 Chain of Custody

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215244

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

Client Contact	Project Manager: Rob Frank	Site Contact: M. Plonski	Date: 6.18.2020	COC No:
Company Name: Cabrera Services	Tel/Fax:	Lab Contact: Evan Viola	Carrier:	____ of ____ COCs
Address: 50 Founders Plaza Ste 207	Analysis Turnaround Time			Sampler:
City/State/Zip: E. Hartford, CT 06108	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Brookhaven Natl Lab	☒ 1 week			
Site: 705 Stack Demo	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TRITIUM (H3)	Nickel 63	GAMMA SPEC	ISO-U	Alpha SPEC Sr-90	Sample Specific Notes:
HFBR-013-061820	6/18/20	1400		(WIPE (WET)				X	X				2X = 1(H3) + 1(Ni63)
HFBR-014-061820								X	X				
HFBR-015-061820								X	X				
HFBR-016-061820								X	X				
HFBR-017-061820								X	X				
HFBR-018-061820								X	X				
HFBR-019-061820								X	X				
HFBR-020-061820								X	X				
HFBR-D007-061820										X	X	X	DRY WIPES
HFBR-D007A-061820										X	X	X	
HFBR-D008-061820										X	X	X	
HFBR-D008A-061820										X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Derek Bond	Cabrera Services	6/19/20	Foster	BNL	6/19/2020 0930
Foster	BNL	6/22/2020 0940	Theodore D Heron	BNL	6/22/2020 0940
Theodore D Heron	BNL	6/22/2020 NOON	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Michael Cunningham TDA STL 6/24/2020 13:15

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314.298.8566 Fax: 314.298.8757

Chain of Custody Record 215245

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: ROB FRANK	Site Contact: M. PLOSKI	Date: 6.18.20	COC No:
Company Name: CABRERA SERVICES	Tel/Fax:	Lab Contact: JOAN VANCA	Carrier:	____ of ____ COCs
Address: 50 FOUNDERS Plaza Ste 201	Analysis Turnaround Time			Sampler:
City/State/Zip: E. HARTFORD, CT 06108	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: BROOKHAVEN NATIONAL LAB	☒ 1 week			
Site: 705 STACK BLDG	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec	FSO-GL	Alpha Spec Sr-90	Sample Specific Notes:
HFBR-D009-061820	6/18/20			DRY WIPE				X	X	X	DRY WIPES
HFBR-D009A-061820				↓				X	X	X	↓
HFBR-D020-061820								X	X	X	
HFBR-D020A-061820								X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Please Contact Mike Winters @ 352-610-2150 w/ Analytical Results

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Wes Bernd	Cabrera Services	6/19/20	FOSTER	BNL	6/19/2020 0930
FOSTER	BNL	6/22/2020 0940	Theodore G. Heuer	BNL	6/22/2020 0940
Theodore G. Heuer	BNL	6/22/2020 1400	Received in Laboratory by: FED EX	Company:	Date/Time:

FED EX

Micha Konieczny ETA STL 6/24/2020 13:15

Login Sample Receipt Checklist

Client: Cabrera Services

Job Number: 160-38495-3

Login Number: 38495
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: Cabrera Services
Job ID: 160-38495-3
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-3

Method	Method Description	Protocol	Laboratory
901.1	Cesium 137 & Other Gamma Emitters (GS)	EPA	TAL SL
None	Direct Addition of Sample	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

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

Sample Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-38495-29	HFBR-D007-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-30	HFBR-D008-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-31	HFBR-D009-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	
160-38495-32	HFBR-D020-061820 COMP	Filter	06/18/20 14:00	06/24/20 13:15	

Client Sample Results

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-3

Client Sample ID: HFBR-D007-061820 COMP

Lab Sample ID: 160-38495-29

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	8.44	U	17.7	17.7		19.3	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Americium-241	**4.64**		3.52	3.55		4.47	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Bismuth-212	0.000	U	40.8	40.8		104	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Cesium-137	**138**		11.9	18.6	20.0	3.83	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Cobalt-60	2.35	U	4.58	4.58		6.99	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Lead-210	17.8	U	35.9	36.0		60.4	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Lead-212	4.00	U	9.17	9.19		15.4	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Lead-214	-4.81	U	10.7	10.7		18.2	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Potassium-40	41.8	U	69.6	69.7		73.0	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Protactinium-231	63.9	U	211	211		355	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Rhodium-106	-9.34	U	48.1	48.1		83.3	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Silver-108m	4.80	U	4.44	4.47		5.09	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Thallium-208	0.152	U	1.44	1.44		7.18	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Thorium-227	15.0	U	18.5	18.6		59.4	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Thorium-232	8.44	U	17.7	17.7		19.3	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Thorium-234	0.000	U	23.6	23.6		108	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1
Uranium-235	7.17	U	16.6	16.6		70.9	pCi/Sample	07/06/20 15:11	07/07/20 09:04	1

Client Sample ID: HFBR-D008-061820 COMP

Lab Sample ID: 160-38495-30

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	6.07	U	10.9	10.9		46.3	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Americium-241	**7.72**		5.47	5.52		7.13	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Bismuth-212	-36.6	U	111	111		191	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Cesium-137	**238**		21.5	32.8	20.0	10.3	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Cobalt-60	1.41	U	13.0	13.0		15.0	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Lead-210	26.9	U	47.6	47.7		71.1	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Lead-212	0.282	U	12.9	12.9		22.0	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Lead-214	-3.24	U	17.1	17.1		29.3	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Potassium-40	-7.51	U	95.9	95.9		141	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Protactinium-231	-94.3	U	293	293		492	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Rhodium-106	16.7	U	66.8	66.8		116	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Silver-108m	**6.25**		5.07	5.11		5.95	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Thallium-208	-0.134	U	8.05	8.05		10.7	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Thorium-227	14.1	U	25.4	25.5		75.8	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Thorium-232	6.07	U	10.9	10.9		46.3	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Thorium-234	-92.5	U	51.1	52.2		123	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1
Uranium-235	9.39	U	25.1	25.1		42.6	pCi/Sample	07/06/20 15:11	07/07/20 10:20	1

Client Sample Results

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-3

Client Sample ID: HFBR-D009-061820 COMP

Lab Sample ID: 160-38495-31

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	14.4	U	15.3	15.3		16.3	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Americium-241	1.13	U	5.78	5.78		9.81	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Bismuth-212	-8.15	U	51.4	51.4		91.2	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Cesium-137	**101**		11.6	15.7	20.0	6.07	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Cobalt-60	-1.14	U	7.46	7.46		8.33	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Lead-210	-27.7	U	59.7	59.8		99.7	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Lead-212	-4.70	U	10.8	10.9		18.1	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Lead-214	-3.05	U	10.2	10.2		17.3	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Potassium-40	27.1	U	81.9	82.0		87.0	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Protactinium-231	66.0	U	207	207		348	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Rhodium-106	-37.8	U	100	100		168	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Silver-108m	1.58	U	4.36	4.37		6.03	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Thallium-208	**6.79**		6.82	6.86		4.99	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Thorium-227	11.6	U	23.6	23.7		51.5	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Thorium-232	14.4	U	15.3	15.3		16.3	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Thorium-234	16.8	U	56.4	56.5		94.6	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1
Uranium-235	-0.314	U	0.521	0.522		59.9	pCi/Sample	07/06/20 15:11	07/07/20 10:38	1

Client Sample ID: HFBR-D020-061820 COMP

Lab Sample ID: 160-38495-32

Date Collected: 06/18/20 14:00
Matrix: Filter
Date Received: 06/24/20 13:15

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	11.4	U	18.7	18.7		19.3	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Americium-241	**8.16**		5.20	5.27		5.58	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Bismuth-212	0.982	U	58.2	58.2		104	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Cesium-137	**141**		12.0	19.0	20.0	3.55	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Cobalt-60	0.633	U	6.08	6.08		6.99	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Lead-210	-24.4	U	52.8	52.9		88.5	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Lead-212	3.81	U	8.88	8.89		14.9	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Lead-214	5.30	U	10.4	10.4		16.7	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Potassium-40	0.000	U	15.5	15.5		87.0	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Protactinium-231	61.4	U	146	146		330	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Rhodium-106	10.9	U	79.3	79.3		135	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Silver-108m	0.207	U	0.639	0.639		6.83	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Thallium-208	**5.17**		3.54	3.58		3.70	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Thorium-227	5.22	U	7.88	7.91		67.6	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Thorium-232	11.4	U	18.7	18.7		19.3	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Thorium-234	-13.5	U	71.3	71.3		119	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1
Uranium-235	12.1	U	36.4	36.4		60.8	pCi/Sample	07/06/20 15:11	07/07/20 12:11	1

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-475402/1-A
Matrix: Filter
Analysis Batch: 475693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475402

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	-0.9318	U	22.5	22.5		26.3	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Americium-241	-2.665	U	5.16	5.17		8.64	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Bismuth-212	4.417	U	53.5	53.5		95.3	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Cesium-137	-3.050	U	5.62	5.62	20.0	9.46	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Cobalt-60	-0.5063	U	6.06	6.06		6.99	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Lead-210	-22.86	U	49.5	49.6		83.0	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Lead-212	-4.280	U	9.49	9.51		15.9	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Lead-214	-8.392	U	10.0	10.0		17.5	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Potassium-40	23.23	U	93.5	93.6		98.9	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Protactinium-231	0.0000	U	58.6	58.6		412	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Rhodium-106	32.92	U	57.8	57.9		81.7	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Silver-108m	1.493	U	3.97	3.97		4.82	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Thallium-208	2.382	U	7.12	7.13		6.41	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Thorium-227	10.69	U	21.2	21.2		57.9	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Thorium-232	-0.9318	U	22.5	22.5		26.3	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Thorium-234	4.626	U	20.6	20.6		99.3	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1
Uranium-235	2.733	U	29.9	29.9		50.7	pCi/Sample	07/06/20 15:11	07/07/20 07:32	1

Lab Sample ID: LCS 160-475402/2-A
Matrix: Filter
Analysis Batch: 475424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475402

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			31700	31220		3250		95.6	pCi/Sam	98	87 - 116		
Cesium-137			9790	9736		1020	20.0	45.0	pCi/Sam	99	87 - 120		
Cobalt-60			5740	5751		585		19.1	pCi/Sam	100	87 - 115		

Lab Sample ID: 160-38495-29 DU
Matrix: Filter
Analysis Batch: 475424

Client Sample ID: HFBR-D007-061820 COMP
Prep Type: Total/NA
Prep Batch: 475402

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Actinium-228	8.44	U		18.38	U	18.5		21.6	pCi/Sam			0.27	1
Americium-241	4.64			-0.4645	U	6.08		9.09	pCi/Sam			0.53	1
Bismuth-212	0.000	U		-50.77	U	120		204	pCi/Sam			0.32	1
Cesium-137	138			162.7		24.5	20.0	9.15	pCi/Sam			0.58	1
Cobalt-60	2.35	U		2.282	U	5.61		9.49	pCi/Sam			0.01	1
Lead-210	17.8	U		55.25	U	52.6		71.4	pCi/Sam			0.42	1
Lead-212	4.00	U		-5.697	U	7.88		24.1	pCi/Sam			0.57	1
Lead-214	-4.81	U		-7.899	U	16.0		26.9	pCi/Sam			0.12	1
Potassium-40	41.8	U		-7.511	U	95.9		141	pCi/Sam			0.30	1
Protactinium-231	63.9	U		75.40	U	188		429	pCi/Sam			0.03	1
Rhodium-106	-9.34	U		36.32	U	85.4		155	pCi/Sam			0.34	1
Silver-108m	4.80	U		2.211	U	6.60		9.59	pCi/Sam			0.23	1
Thallium-208	0.152	U		4.405	U	6.65		7.54	pCi/Sam			0.53	1
Thorium-227	15.0	U		5.890	U	5.56		96.9	pCi/Sam			0.38	1

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-38495-29 DU
Matrix: Filter
Analysis Batch: 475424

Client Sample ID: HFBR-D007-061820 COMP
Prep Type: Total/NA
Prep Batch: 475402

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Thorium-232	8.44	U		18.38	U	18.5		21.6	pCi/Sam			0.27	1
Thorium-234	0.000	U		13.22	U	34.0		63.8	pCi/Sam			0.23	1
Uranium-235	7.17	U		17.88	U	25.1		45.9	pCi/Sam			0.26	1

QC Association Summary

Client: Cabrera Services
Project/Site: BNL Decommissioning Project

Job ID: 160-38495-3

Rad

Prep Batch: 475402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-38495-29	HFBR-D007-061820 COMP	Total/NA	Filter	None	
160-38495-30	HFBR-D008-061820 COMP	Total/NA	Filter	None	
160-38495-31	HFBR-D009-061820 COMP	Total/NA	Filter	None	
160-38495-32	HFBR-D020-061820 COMP	Total/NA	Filter	None	
MB 160-475402/1-A	Method Blank	Total/NA	Filter	None	
LCS 160-475402/2-A	Lab Control Sample	Total/NA	Filter	None	
160-38495-29 DU	HFBR-D007-061820 COMP	Total/NA	Filter	None	

A-2
Reference Area Sampling

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41496-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
4/28/2021 2:48:08 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

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

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

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Job ID: 160-41496-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41496-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 3/18/2021 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 12.9º C, 13.1º C and 13.9º C.

Receipt Exceptions

Job ID: 160-41496-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The CoC does not list any sample dates or times. Sample date and times were taken from the containers.

PERCENT SOLIDS

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 03/31/2021.

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

STRONTIUM-90 (GFPC)

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 03/19/2021, prepared on 03/25/2021 and analyzed on 04/07/2021.

Preparation Batch 160-503169:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. The samples contained pieces of wood: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), and (160-41496-D-1-A DU).

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

TRITIUM

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 03/23/2021 and analyzed on 03/26/2021 and 03/27/2021.

Preparation Batch 160-502782:
The batch for the following samples was analyzed on Friday 3/26/21, but due to the long count time for each sample the sequence finished just after midnight on Saturday 3/27/21. As no daily check was performed that Saturday, the bracketing CCV for this data is pulled from the daily check on Sunday 3/28/21: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), (LCS 160-502782/2-A), (MB 160-502782/1-A), (160-41392-L-1-A), (160-41392-L-1-B MS), and (160-41496-F-18-B DU).

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

ISOTOPIC CURIUM AND/OR AMERICIUM 241 (ALPHA SPECTROMETRY)

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16),

Job ID: 160-41496-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Isotopic Curium and/or Americium 241 (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 03/19/2021, prepared on 04/01/2021 and analyzed on 04/22/2021, 04/23/2021 and 04/26/2021.

Preparation Batch 160-504014:
The tracer recovery was 114%, slightly above the upper QC limit of 110%. The laboratory believes this is a sporadic statistical occurrence and does not significantly affect the results: RA-201-031721 (160-41496-2).

Manual Integrations and adjustments to Regions of Interest (ROI) were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report: RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), and (LCS 160-504014/2-A).

The Am-241 and Cm-242 result in the method blank (MB) are negative more than 3 times the 1-sigma uncertainty. This appears to be random in nature - no additional action is necessary: (MB 160-504014/1-A).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 03/19/2021, prepared on 04/01/2021 and analyzed on 04/23/2021 and 04/26/2021.

Preparation Batch 160-504016:
The Pu-238 result is negative more than 3 times the 1-sigma uncertainty. This appears to be random in nature - no further action is required.
RA-005-031721 (160-41496-6)

Manual Integrations and adjustments to Regions of Interest (ROI) were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report: RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-014-031721 (160-41496-16), and (LCS 160-504016/2-A).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 03/19/2021, prepared on 04/01/2021 and analyzed on 04/22/2021.

Preparation Batch 160-504017:
Manual integration was performed on the following samples: RA-007-031721 (160-41496-8), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-211-031721 (160-41496-13), RA-013-031721 (160-41496-15), and RA-016-031721 (160-41496-18).

The CCV for March was inadvertently missed during monthly checks for detector AV94, 96, and 97. All batch QC was within limits. The results were reported with this narrative: RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), and RA-003-031721 (160-41496-4).

Job ID: 160-41496-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 03/19/2021, prepared on 03/23/2021 and analyzed on 04/13/2021 and 04/14/2021.

Preparation Batch 160-502826:
For samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), and (160-41496-E-18-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17) and RA-016-031721 (160-41496-18) were analyzed for Nickel 59/63 in accordance with STL-RC-0055.

Job ID: 160-41496-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The samples were leached on 03/19/2021, prepared on 04/02/2021 and analyzed on 04/08/2021 and 04/09/2021.

Preparation Batch 160-503186:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. Sample 160-41392-1 and 1 DU contained rocks. Samples 160-41496-1-18 contained detritus: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), and RA-016-031721 (160-41496-18).

The following samples were filtered through a 0.35 micron filter before 1 M ammonium citrate was added: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), and RA-016-031721 (160-41496-18).

Samples 160-41392-1 and 1 DU were filtered again after their pH was raised to between 8 and 9 because a white precipitant dropped out of solution as ammonium hydroxide was added.

Preparation Batch 160-504117:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix. The samples contained detritus. Sample 160-41392-1 contained small rocks: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18) and (160-41496-D-1-A DU).

The following samples contained sediment after digestion and dissolution. All of the samples, MB, and LCS were filtered through a 0.45 micron filter before columns. The samples contained detritus. Sample 160-41392-1 contained small rocks: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), and (160-41496-D-1-A DU).

The nickel carrier recovery for the following samples was below the lower QC limit (40%). The samples exhibited matrix interference as noted by the prep analyst. The sample results all meet the detection goal, therefore the lab does not believe this excursion adversely affects the data: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), and RA-016-031721 (160-41496-18).

Metals (ICP) - Ni Native and Carrier Concentration
Analytical Batch 160-504918:
The internal standard was outside QC limits in the CCB. All analytes were within acceptable limits, showing that there was no bias. Original results were reported: (CCB 160-504918/78).

Preparation Batch 160-503393, Analytical Batch 160-503955:
The following samples were diluted due to the nature of the sample matrices. Elevated reporting limits (RLs) were provided: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8),

Job ID: 160-41496-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), (LCS 160-503393/2-A ^10), (MB 160-503393/1-A ^10) and (160-41392-H-1-Q ^10).

Preparation Batches 160-504270, 160-504270, 160-504270, 160-504270, 160-504270, and 160-504270; Analytical Batch 160-504917: The following samples were diluted due to the sample matrices. The samples were soils which are prone to contain matrix interferences and cause internal standard failure. The samples were diluted to reduce the amount of a potentially difficult matrix introduced to the instrument: RA-001-031721 (160-41496-1), RA-201-031721 (160-41496-2), RA-002-031721 (160-41496-3), RA-003-031721 (160-41496-4), RA-004-031721 (160-41496-5), RA-005-031721 (160-41496-6), RA-006-031721 (160-41496-7), RA-007-031721 (160-41496-8), RA-008-031721 (160-41496-9), RA-009-031721 (160-41496-10), RA-010-031721 (160-41496-11), RA-011-031721 (160-41496-12), RA-211-031721 (160-41496-13), RA-012-031721 (160-41496-14), RA-013-031721 (160-41496-15), RA-014-031721 (160-41496-16), RA-015-031721 (160-41496-17), RA-016-031721 (160-41496-18), (LCS 160-504270/2-A ^10), (MB 160-504270/1-A ^10), and (160-41496-D-1-S DU ^10).

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

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13715 Rider Trail North

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phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**	**Site Contact: Doug Beard** / **Date:**
FPM	Email: d.ours@fpm-remediations.com	**Lab Contact: Ivan Vania** / **Carrier:**
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	COC No: _____ of _____ COCs
Oneida, NY 13421	**Analysis Turnaround Time**	TALS Project #:
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS	Sampler: Doug Beard
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days	**For Lab Use Only:**
Project Name: BNL 705 Stack Demo	☐ 2 weeks	Walk-in Client:
Site: BNL	☐ 1 week	Lab Sampling:
P O # 1085-20-01-01	☐ 2 days	Job / SDG No.:
	☐ 1 day	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Alpha Spec - Am-241	Alpha Spec - Pu-238, Pu-239/240	Alpha Spec - U-234, 235, 238	Strontium-90 (GFPC)	Nickel-63 (LSC)	Tritium (LSC)	Sample Specific Notes:
RA-001-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-201-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-002-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-003-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-004-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-005-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-006-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-007-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-008-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-009-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-010-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-011-031721			G	S	6	N	N	3	2	2	2	2	2	1	

160-41496 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by: Doug Beard	Company: Eurofins	Date/Time: 3/17/21	Received by: FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Siena Wallpe	Company: ETAS	Date/Time: 3/18/21 0925
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date:	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier:	_____ of _____ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Gamma Spec: Ra-226+detects	Alpha Spec - Am-241	Alpha Spec - Pu-238, Pu-239/240	Alpha Spec - U-234, 235, 238	Strontium-90 (GFPC)	Nickel-63 (LSC)	Tritium (LSC)	Sample Specific Notes:
RA-211-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-012-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-013-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-014-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-015-031721			G	S	6	N	N	3	2	2	2	2	2	1	
RA-016-031721			G	S	6	N	N	3	2	2	2	2	2	1	
			G	S	6	N	N	3	2	2	2	2	2	1	
			G	S	6	N	N	3	2	2	2	2	2	1	
			G	S	6	N	N	3	2	2	2	2	2	1	
			G	S	6	N	N	3	2	2	2	2	2	1	
			G	S	6	N	N	3	2	2	2	2	2	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by: Doug Beard	Company: Eurofins	Date/Time: 3/17/21	Received by: FEDEX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Sierra Wallgren	Company: ETAST	Date/Time: 3/18/21 0925
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41496-1

Login Number: 41496
List Number: 1
Creator: O'Gara, Mallory L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41496-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
Q	Tracer is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Method	Method Description	Protocol	Laboratory
Moisture	Percent Moisture	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
None = None
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41496-1	RA-001-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-2	RA-201-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-3	RA-002-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-4	RA-003-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-5	RA-004-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-6	RA-005-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-7	RA-006-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-8	RA-007-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-9	RA-008-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-10	RA-009-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-11	RA-010-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-12	RA-011-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-13	RA-211-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-14	RA-012-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-15	RA-013-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-16	RA-014-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-17	RA-015-031721	Solid	03/17/21 11:00	03/18/21 09:25	
160-41496-18	RA-016-031721	Solid	03/17/21 11:00	03/18/21 09:25	

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Client Sample ID: RA-001-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.120	U	0.157	0.158	3.00	0.268	pCi/g	03/25/21 09:08	04/07/21 17:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*91.0*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*
Y Carrier	*78.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0653	U	0.270	0.270	1.00	0.502	pCi/g	03/23/21 08:28	03/26/21 17:36	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0181	U	0.0484	0.0485	1.00	0.0951	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*86.7*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00901	U	0.0262	0.0262	1.00	0.0567	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	-0.0162	U	0.0106	0.0107	1.00	0.0615	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00845	U	0.0417	0.0417	1.00	0.0960	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.475**		0.129	0.135	1.00	0.0506	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.7*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0498	U	0.153	0.154		0.201	pCi/g	03/23/21 16:50	04/13/21 12:49	1
Cesium-137	**0.231**		0.0630	0.0673		0.0463	pCi/g	03/23/21 16:50	04/13/21 12:49	1
Cobalt-60	0.00242	U	0.0607	0.0607		0.0718	pCi/g	03/23/21 16:50	04/13/21 12:49	1
Radium-226	**0.540**		0.116	0.128	1.00	0.0955	pCi/g	03/23/21 16:50	04/13/21 12:49	1
Europium-152	0.103	U	0.179	0.180		0.169	pCi/g	03/23/21 16:50	04/13/21 12:49	1

Client Sample ID: RA-001-031721

Lab Sample ID: 160-41496-1
Matrix: Solid
Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.239		0.0793	0.0830		0.113	pCi/g	03/23/21 16:50	04/13/21 12:49	1
Potassium-40	6.11		1.00	1.18		0.577	pCi/g	03/23/21 16:50	04/13/21 12:49	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.818*		*0.163*	*0.182*		*0.0733*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:49*	*1*
Bi-214	*0.540*		*0.116*	*0.128*		*0.0955*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:49*	*1*
Pb-212	*0.721*		*0.0999*	*0.135*		*0.0977*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:49*	*1*
Pb-214	*0.561*		*0.0969*	*0.112*		*0.107*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:49*	*1*
Tl-208	*0.261*		*0.0591*	*0.0648*		*0.0457*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:49*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.584	U	2.49	2.49	5.00	4.40	pCi/g	04/02/21 07:05	04/08/21 11:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*29.2*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 11:34*	*1*

Client Sample ID: RA-201-031721

Lab Sample ID: 160-41496-2
Matrix: Solid
Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.211	U	0.182	0.183	3.00	0.298	pCi/g	03/25/21 09:08	04/07/21 17:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*
Y Carrier	*88.2*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0519	U	0.272	0.272	1.00	0.505	pCi/g	03/23/21 08:28	03/26/21 17:59	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0208	U	0.0384	0.0384	1.00	0.0717	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*114*	*Q*	*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Client Sample ID: RA-201-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-2

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0109	U	0.0182	0.0183	1.00	0.0643	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.00548	U	0.0218	0.0218	1.00	0.0520	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*102*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0675**		0.0543	0.0546	1.00	0.0581	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.312**		0.101	0.104	1.00	0.0466	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.9*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0911	U	0.182	0.182		0.236	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Cesium-137	0.0388	U	0.0606	0.0607		0.103	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Cobalt-60	-0.0434	U	0.109	0.109		0.118	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Radium-226	0.0723	U	0.0914	0.0917	1.00	0.247	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Europium-152	0.114	U	0.156	0.157		0.172	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Europium-154	-0.000815	U	0.000959	0.000963		0.125	pCi/g	03/23/21 16:50	04/13/21 12:50	1
Potassium-40	**6.73**		1.01	1.22		0.294	pCi/g	03/23/21 16:50	04/13/21 12:50	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*1.10*		*0.186*	*0.216*		*0.0744*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:50*	*1*
Pb-212	*0.845*		*0.0999*	*0.146*		*0.0765*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:50*	*1*
Pb-214	*0.580*		*0.0970*	*0.114*		*0.102*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:50*	*1*
Tl-208	*0.306*		*0.0597*	*0.0673*		*0.0320*	*pCi/g*	*03/23/21 16:50*	*04/13/21 12:50*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.407	U	2.06	2.06	5.00	3.64	pCi/g	04/02/21 07:05	04/08/21 13:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*35.5*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 13:47*	*1*

Client Sample ID: RA-002-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-3

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.195	U	0.152	0.153	3.00	0.244	pCi/g	03/25/21 09:08	04/07/21 17:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.6*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*
Y Carrier	*91.6*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.120	U	0.260	0.260	1.00	0.494	pCi/g	03/23/21 08:28	03/26/21 18:21	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0106	U	0.0299	0.0299	1.00	0.0625	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*104*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00173	U	0.0155	0.0155	1.00	0.0492	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.00866	U	0.0294	0.0294	1.00	0.0630	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*110*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00536	U	0.00742	0.00744	1.00	0.0600	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.346**		0.108	0.112	1.00	0.0532	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*73.4*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0576	U	0.130	0.130		0.178	pCi/g	03/23/21 16:50	04/13/21 15:15	1
Cesium-137	**0.201**		0.0738	0.0766		0.102	pCi/g	03/23/21 16:50	04/13/21 15:15	1
Cobalt-60	0.0189	U	0.0508	0.0509		0.0601	pCi/g	03/23/21 16:50	04/13/21 15:15	1
Radium-226	**0.661**		0.127	0.144	1.00	0.0618	pCi/g	03/23/21 16:50	04/13/21 15:15	1
Europium-152	**0.290**		0.138	0.141		0.191	pCi/g	03/23/21 16:50	04/13/21 15:15	1

Client Sample ID: RA-002-031721

Lab Sample ID: 160-41496-3

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0575	U	0.0952	0.0954		0.135	pCi/g	03/23/21 16:50	04/13/21 15:15	1
Potassium-40	**5.88**		0.995	1.16		0.323	pCi/g	03/23/21 16:50	04/13/21 15:15	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.685*		*0.193*	*0.205*		*0.195*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:15*	*1*
Bi-214	*0.661*		*0.127*	*0.144*		*0.0618*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:15*	*1*
Pb-212	*0.703*		*0.0987*	*0.133*		*0.0832*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:15*	*1*
Pb-214	*0.570*		*0.112*	*0.126*		*0.0832*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:15*	*1*
Tl-208	*0.210*		*0.0518*	*0.0560*		*0.0352*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:15*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.492	U	2.35	2.35	5.00	4.06	pCi/g	04/02/21 07:05	04/08/21 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*31.7*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 14:53*	*1*

Client Sample ID: RA-003-031721

Lab Sample ID: 160-41496-4

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.131	U	0.152	0.152	3.00	0.255	pCi/g	03/25/21 09:08	04/07/21 17:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.4*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:56*	*1*
Y Carrier	*93.8*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:56*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.275	U	0.249	0.250	1.00	0.504	pCi/g	03/23/21 08:28	03/26/21 18:44	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.00203	U	0.0434	0.0434	1.00	0.0960	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*80.5*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Client Sample ID: RA-003-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-4

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0229	0.0229	1.00	0.0606	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.00925	U	0.0215	0.0215	1.00	0.0458	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*110*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00288	U	0.00565	0.00566	1.00	0.0558	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.303**		0.104	0.107	1.00	0.0448	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.6*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0269	U	0.121	0.121		0.212	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Cesium-137	**0.242**		0.0916	0.0949		0.0887	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Cobalt-60	0.00931	U	0.0775	0.0775		0.101	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Radium-226	**0.509**		0.165	0.173	1.00	0.158	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Europium-152	0.0597	U	0.286	0.286		0.484	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Europium-154	0.0165	U	0.112	0.112		0.137	pCi/g	03/23/21 16:50	04/13/21 15:14	1
Potassium-40	**5.88**		1.31	1.43		0.542	pCi/g	03/23/21 16:50	04/13/21 15:14	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.792*		*0.191*	*0.206*		*0.134*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:14*	*1*
Bi-214	*0.509*		*0.165*	*0.173*		*0.158*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:14*	*1*
Pb-212	*0.688*		*0.121*	*0.149*		*0.118*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:14*	*1*
Pb-214	*0.644*		*0.131*	*0.147*		*0.0926*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:14*	*1*
Tl-208	*0.281*		*0.0690*	*0.0747*		*0.0317*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:14*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-1.27	U	1.80	1.80	5.00	3.25	pCi/g	04/02/21 07:05	04/08/21 15:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*39.3*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 15:59*	*1*

Client Sample ID: RA-004-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-5

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.109	U	0.152	0.152	3.00	0.259	pCi/g	03/25/21 09:08	04/07/21 17:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.2*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:55*	*1*
Y Carrier	*85.2*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:55*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.112	U	0.261	0.261	1.00	0.496	pCi/g	03/23/21 08:28	03/26/21 19:07	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0556	U	0.0506	0.0510	1.00	0.0700	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*81.9*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0202	U	0.0252	0.0252	1.00	0.0355	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.0128	U	0.0207	0.0207	1.00	0.0355	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*100*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00901	U	0.0243	0.0243	1.00	0.0581	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.448**		0.133	0.138	1.00	0.0849	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.7*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0655	U	0.125	0.125		0.213	pCi/g	03/23/21 16:50	04/13/21 15:17	1
Cesium-137	**0.153**		0.0430	0.0458		0.0288	pCi/g	03/23/21 16:50	04/13/21 15:17	1
Cobalt-60	**0.0377**		0.0169	0.0173		0.0259	pCi/g	03/23/21 16:50	04/13/21 15:17	1
Radium-226	**0.431**		0.0982	0.108	1.00	0.0801	pCi/g	03/23/21 16:50	04/13/21 15:17	1
Europium-152	0.0701	U	0.0961	0.0964		0.138	pCi/g	03/23/21 16:50	04/13/21 15:17	1

Client Sample ID: RA-004-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-5

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0609	U	0.0811	0.0813		0.0928	pCi/g	03/23/21 16:50	04/13/21 15:17	1
Potassium-40	**4.67**		0.839	0.961		0.522	pCi/g	03/23/21 16:50	04/13/21 15:17	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.625*		*0.124*	*0.139*		*0.187*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*
Bi-214	*0.431*		*0.0982*	*0.108*		*0.0801*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*
Pb-210	*2.01*		*0.855*	*0.886*		*0.943*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*
Pb-212	*0.673*		*0.0867*	*0.122*		*0.0727*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*
Pb-214	*0.386*		*0.0863*	*0.0948*		*0.117*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*
Tl-208	*0.197*		*0.0429*	*0.0474*		*0.0270*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:17*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-1.68	U	1.86	1.87	5.00	3.40	pCi/g	04/02/21 07:05	04/08/21 17:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*37.8*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 17:05*	*1*

Client Sample ID: RA-005-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-6

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.136	U	0.158	0.159	3.00	0.267	pCi/g	03/25/21 09:08	04/07/21 17:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.9*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:55*	*1*
Y Carrier	*85.2*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:55*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0460	U	0.281	0.281	1.00	0.501	pCi/g	03/23/21 08:28	03/26/21 19:29	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0210	U	0.0432	0.0433	1.00	0.0831	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*83.4*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Client Sample ID: RA-005-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-6

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0399	U	0.0171	0.0174	1.00	0.0869	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	-0.00571	U	0.0244	0.0245	1.00	0.0692	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.4*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0120	U	0.0439	0.0439	1.00	0.0981	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.300**		0.111	0.113	1.00	0.0873	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.2*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0709	U	0.148	0.149		0.253	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Cesium-137	**0.197**		0.0745	0.0771		0.107	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Cobalt-60	0.0147	U	0.0258	0.0258		0.0537	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Radium-226	**0.510**		0.128	0.138	1.00	0.112	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Europium-152	0.0393	U	0.0445	0.0447		0.453	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Europium-154	0.0291	U	0.0740	0.0741		0.127	pCi/g	03/23/21 16:50	04/13/21 15:16	1
Potassium-40	**5.77**		0.932	1.10		0.289	pCi/g	03/23/21 16:50	04/13/21 15:16	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.537*		*0.179*	*0.186*		*0.131*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:16*	*1*
Bi-214	*0.510*		*0.128*	*0.138*		*0.112*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:16*	*1*
Pb-212	*0.859*		*0.100*	*0.148*		*0.0766*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:16*	*1*
Pb-214	*0.631*		*0.150*	*0.163*		*0.128*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:16*	*1*
Tl-208	*0.316*		*0.0612*	*0.0691*		*0.0323*	*pCi/g*	*03/23/21 16:50*	*04/13/21 15:16*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.443	U	2.02	2.02	5.00	3.56	pCi/g	04/02/21 07:05	04/08/21 18:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*36.1*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 18:11*	*1*

Client Sample ID: RA-006-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-7

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0724	U	0.127	0.127	3.00	0.221	pCi/g	03/25/21 09:08	04/07/21 17:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.138	U	0.259	0.259	1.00	0.495	pCi/g	03/23/21 08:28	03/26/21 19:52	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00987	U	0.0260	0.0260	1.00	0.0761	pCi/g	04/01/21 12:36	04/22/21 13:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*91.5*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:24*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00560	U	0.0175	0.0176	1.00	0.0587	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.0168	U	0.0262	0.0262	1.00	0.0462	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*105*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0409	U	0.0431	0.0433	1.00	0.0528	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.416**		0.121	0.125	1.00	0.0657	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*84.8*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0709	U	0.163	0.163		0.224	pCi/g	03/23/21 16:50	04/13/21 17:55	1
Cesium-137	**0.201**		0.0750	0.0778		0.104	pCi/g	03/23/21 16:50	04/13/21 17:55	1
Cobalt-60	0.0183	U	0.0309	0.0310		0.0831	pCi/g	03/23/21 16:50	04/13/21 17:55	1
Radium-226	**0.527**		0.123	0.134	1.00	0.0845	pCi/g	03/23/21 16:50	04/13/21 17:55	1
Europium-152	0.0507	U	0.0928	0.0929		0.193	pCi/g	03/23/21 16:50	04/13/21 17:55	1

Client Sample ID: RA-006-031721

Lab Sample ID: 160-41496-7

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0841	U	0.106	0.106		0.132	pCi/g	03/23/21 16:50	04/13/21 17:55	1
Potassium-40	**5.18**		0.951	1.08		0.335	pCi/g	03/23/21 16:50	04/13/21 17:55	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.844*		*0.167*	*0.187*		*0.0856*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*
Bi-212	*1.81*		*0.511*	*0.543*		*0.278*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*
Bi-214	*0.527*		*0.123*	*0.134*		*0.0845*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*
Pb-212	*0.820*		*0.108*	*0.150*		*0.0884*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*
Pb-214	*0.625*		*0.122*	*0.138*		*0.111*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*
Tl-208	*0.283*		*0.0730*	*0.0784*		*0.0567*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:55*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0949	U	2.03	2.03	5.00	3.55	pCi/g	04/02/21 07:05	04/08/21 19:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*36.0*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 19:17*	*1*

Client Sample ID: RA-007-031721

Lab Sample ID: 160-41496-8

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.200	U	0.160	0.161	3.00	0.259	pCi/g	03/25/21 09:08	04/07/21 17:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*
Y Carrier	*90.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.172	U	0.265	0.266	1.00	0.517	pCi/g	03/23/21 08:28	03/26/21 20:14	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00348	U	0.0160	0.0160	1.00	0.0522	pCi/g	04/01/21 12:36	04/22/21 13:23	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*100*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:23*	*1*

Client Sample ID: RA-007-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-8

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00356	U	0.0215	0.0215	1.00	0.0534	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.0107	U	0.0300	0.0300	1.00	0.0628	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.3*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0181	U	0.0370	0.0370	1.00	0.0737	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.332**		0.105	0.108	1.00	0.0555	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*76.2*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0224	U	0.0994	0.0994		0.235	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Cesium-137	**0.283**		0.0770	0.0822		0.0576	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Cobalt-60	-0.00279	U	0.0734	0.0734		0.0534	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Radium-226	**0.668**		0.167	0.180	1.00	0.130	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Europium-152	0.0406	U	0.0319	0.0321		0.214	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Europium-154	**0.200**		0.0837	0.0862		0.156	pCi/g	03/23/21 16:50	04/13/21 17:54	1
Potassium-40	**5.28**		1.24	1.35		0.540	pCi/g	03/23/21 16:50	04/13/21 17:54	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.888*		*0.202*	*0.221*		*0.134*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:54*	*1*
Bi-214	*0.668*		*0.167*	*0.180*		*0.130*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:54*	*1*
Pb-212	*0.735*		*0.120*	*0.152*		*0.103*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:54*	*1*
Pb-214	*0.631*		*0.134*	*0.149*		*0.124*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:54*	*1*
Tl-208	*0.288*		*0.0697*	*0.0756*		*0.0316*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:54*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0109	U	1.96	1.96	5.00	3.42	pCi/g	04/02/21 07:05	04/08/21 20:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*37.6*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 20:24*	*1*

Client Sample ID: RA-008-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-9

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0420	U	0.136	0.136	3.00	0.243	pCi/g	03/25/21 09:08	04/07/21 17:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.0*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*
Y Carrier	*90.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0913	U	0.264	0.264	1.00	0.499	pCi/g	03/23/21 08:28	03/26/21 20:37	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0137	U	0.0280	0.0280	1.00	0.0558	pCi/g	04/01/21 12:36	04/22/21 13:23	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*107*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:23*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00597	U	0.0295	0.0295	1.00	0.0678	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	-0.0120	U	0.0199	0.0199	1.00	0.0703	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*97.1*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0230	U	0.0319	0.0320	1.00	0.0345	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.383**		0.117	0.122	1.00	0.0517	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.5*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0646	U	0.143	0.143		0.243	pCi/g	03/23/21 16:50	04/13/21 17:56	1
Cesium-137	**0.165**		0.0543	0.0569		0.0426	pCi/g	03/23/21 16:50	04/13/21 17:56	1
Cobalt-60	0.0211	U	0.0172	0.0173		0.0261	pCi/g	03/23/21 16:50	04/13/21 17:56	1
Radium-226	**0.416**		0.105	0.114	1.00	0.0959	pCi/g	03/23/21 16:50	04/13/21 17:56	1
Europium-152	0.0917	U	0.163	0.163		0.141	pCi/g	03/23/21 16:50	04/13/21 17:56	1

Client Sample ID: RA-008-031721

Lab Sample ID: 160-41496-9

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0260	U	0.0349	0.0350		0.116	pCi/g	03/23/21 16:50	04/13/21 17:56	1
Potassium-40	**4.52**		0.829	0.945		0.525	pCi/g	03/23/21 16:50	04/13/21 17:56	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.708*		*0.144*	*0.160*		*0.0666*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*
Bi-212	*0.964*		*0.329*	*0.343*		*0.215*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*
Bi-214	*0.416*		*0.105*	*0.114*		*0.0959*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*
Pb-212	*0.646*		*0.0877*	*0.120*		*0.0805*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*
Pb-214	*0.532*		*0.0880*	*0.103*		*0.101*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*
Tl-208	*0.201*		*0.0598*	*0.0632*		*0.0512*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:56*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0743	U	2.17	2.17	5.00	3.80	pCi/g	04/02/21 07:05	04/08/21 21:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*33.5*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 21:30*	*1*

Client Sample ID: RA-009-031721

Lab Sample ID: 160-41496-10

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0606	U	0.142	0.142	3.00	0.251	pCi/g	03/25/21 09:08	04/07/21 17:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.7*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*
Y Carrier	*90.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.120	U	0.264	0.264	1.00	0.504	pCi/g	03/23/21 08:28	03/26/21 21:00	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0161	U	0.0284	0.0285	1.00	0.0537	pCi/g	04/01/21 12:36	04/22/21 13:23	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*89.4*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:23*	*1*

Client Sample ID: RA-009-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-10

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00360	U	0.0269	0.0269	1.00	0.0635	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.0108	U	0.0304	0.0304	1.00	0.0635	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.5*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00289	U	0.0436	0.0436	1.00	0.105	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.369**		0.117	0.121	1.00	0.0660	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.7*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0215	U	0.131	0.131		0.227	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Cesium-137	**0.277**		0.0629	0.0689		0.0458	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Cobalt-60	0.00549	U	0.0325	0.0325		0.0657	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Radium-226	**0.593**		0.118	0.132	1.00	0.0890	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Europium-152	0.111	U	0.177	0.178		0.167	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Europium-154	**0.126**		0.0540	0.0555		0.111	pCi/g	03/23/21 16:50	04/13/21 17:57	1
Potassium-40	**5.29**		1.04	1.17		0.679	pCi/g	03/23/21 16:50	04/13/21 17:57	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.719*		*0.137*	*0.155*		*0.189*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:57*	*1*
Bi-214	*0.593*		*0.118*	*0.132*		*0.0890*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:57*	*1*
Pb-212	*0.731*		*0.0905*	*0.130*		*0.0758*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:57*	*1*
Pb-214	*0.546*		*0.0920*	*0.107*		*0.101*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:57*	*1*
Tl-208	*0.253*		*0.0552*	*0.0609*		*0.0366*	*pCi/g*	*03/23/21 16:50*	*04/13/21 17:57*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.850	U	1.94	1.94	5.00	3.32	pCi/g	04/02/21 07:05	04/08/21 22:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*38.8*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 22:36*	*1*

Client Sample ID: RA-010-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-11

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.244	U	0.168	0.169	3.00	0.264	pCi/g	03/25/21 09:08	04/07/21 17:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*
Y Carrier	*80.7*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.133	U	0.251	0.252	1.00	0.478	pCi/g	03/23/21 08:28	03/26/21 21:22	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00408	U	0.0259	0.0259	1.00	0.0719	pCi/g	04/01/21 12:36	04/22/21 13:23	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*88.9*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:23*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0178	U	0.0293	0.0293	1.00	0.0536	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.00715	U	0.0210	0.0210	1.00	0.0477	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.7*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00285	U	0.00558	0.00558	1.00	0.0551	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.429**		0.124	0.129	1.00	0.0610	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*73.3*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0603	U	0.137	0.138		0.235	pCi/g	03/23/21 16:50	04/14/21 06:21	1
Cesium-137	0.0342	U	0.0568	0.0569		0.0972	pCi/g	03/23/21 16:50	04/14/21 06:21	1
Cobalt-60	0.00219	U	0.0550	0.0550		0.0651	pCi/g	03/23/21 16:50	04/14/21 06:21	1
Radium-226	**0.448**		0.108	0.117	1.00	0.0956	pCi/g	03/23/21 16:50	04/14/21 06:21	1
Europium-152	0.0344	U	0.0656	0.0657		0.169	pCi/g	03/23/21 16:50	04/14/21 06:21	1

Client Sample ID: RA-010-031721

Lab Sample ID: 160-41496-11

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.00108	U	0.00127	0.00127		0.121	pCi/g	03/23/21 16:50	04/14/21 06:21	1
Potassium-40	**5.18**		0.882	1.02		0.523	pCi/g	03/23/21 16:50	04/14/21 06:21	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.712*		*0.157*	*0.172*		*0.0665*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:21*	*1*
Bi-214	*0.448*		*0.108*	*0.117*		*0.0956*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:21*	*1*
Pb-212	*0.681*		*0.0885*	*0.124*		*0.0772*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:21*	*1*
Pb-214	*0.525*		*0.0877*	*0.103*		*0.104*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:21*	*1*
Tl-208	*0.273*		*0.0524*	*0.0593*		*0.0342*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:21*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-1.26	U	1.95	1.96	5.00	3.52	pCi/g	04/02/21 07:05	04/08/21 23:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*36.4*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 23:42*	*1*

Client Sample ID: RA-011-031721

Lab Sample ID: 160-41496-12

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.167	U	0.144	0.144	3.00	0.235	pCi/g	03/25/21 09:08	04/07/21 17:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.9*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:56*	*1*
Y Carrier	*93.8*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:56*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0258	U	0.282	0.282	1.00	0.513	pCi/g	03/23/21 08:28	03/26/21 21:45	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0205	U	0.0304	0.0304	1.00	0.0531	pCi/g	04/01/21 12:36	04/23/21 12:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*107*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:40*	*1*

Client Sample ID: RA-011-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-12

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0229	0.0229	1.00	0.0605	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	-0.00185	U	0.00362	0.00362	1.00	0.0357	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.5*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0490	U	0.0483	0.0485	1.00	0.0610	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.454**		0.125	0.130	1.00	0.0584	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.0*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0793	U	0.158	0.159		0.205	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Cesium-137	**0.149**		0.0533	0.0554		0.0464	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Cobalt-60	0.0253	U	0.0175	0.0177		0.0262	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Radium-226	**0.463**		0.0931	0.104	1.00	0.0663	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Europium-152	0.0465	U	0.114	0.114		0.166	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Europium-154	0.0392	U	0.0756	0.0757		0.107	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Potassium-40	**5.02**		0.831	0.971		0.264	pCi/g	03/23/21 16:50	04/14/21 06:23	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.526*		*0.221*	*0.227*		*0.214*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Bi-214	*0.463*		*0.0931*	*0.104*		*0.0663*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Pb-212	*0.854*		*0.0929*	*0.143*		*0.0621*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Pb-214	*0.561*		*0.0982*	*0.114*		*0.109*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Tl-208	*0.287*		*0.0544*	*0.0617*		*0.0288*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.824	U	2.24	2.24	5.00	3.98	pCi/g	04/02/21 07:05	04/09/21 00:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*32.2*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 00:48*	*1*

Client Sample ID: RA-211-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-13

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.828**		0.221	0.231	3.00	0.295	pCi/g	03/25/21 09:08	04/07/21 17:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:54*	*1*
Y Carrier	*91.6*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:54*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.178	U	0.245	0.246	1.00	0.474	pCi/g	03/23/21 08:28	03/26/21 22:08	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0155	U	0.0298	0.0298	1.00	0.0897	pCi/g	04/01/21 12:36	04/23/21 12:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*92.3*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:40*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00184	U	0.0157	0.0157	1.00	0.0454	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.0165	U	0.0257	0.0258	1.00	0.0455	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.0*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0202	U	0.0325	0.0326	1.00	0.0559	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.391**		0.119	0.124	1.00	0.0573	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.9*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0298	U	0.166	0.166		0.230	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Cesium-137	**0.164**		0.0565	0.0589		0.0511	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Cobalt-60	-0.0254	U	0.0705	0.0705		0.0862	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Radium-226	**0.538**		0.130	0.141	1.00	0.112	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Europium-152	0.132	U	0.159	0.160		0.187	pCi/g	03/23/21 16:50	04/14/21 06:23	1

Client Sample ID: RA-211-031721

Lab Sample ID: 160-41496-13

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0471	U	0.0899	0.0900		0.138	pCi/g	03/23/21 16:50	04/14/21 06:23	1
Potassium-40	**4.76**		0.997	1.11		0.728	pCi/g	03/23/21 16:50	04/14/21 06:23	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.973*		*0.164*	*0.191*		*0.156*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Bi-212	*1.60*		*0.489*	*0.515*		*0.287*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Bi-214	*0.538*		*0.130*	*0.141*		*0.112*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Pb-212	*0.799*		*0.110*	*0.150*		*0.0966*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Pb-214	*0.571*		*0.119*	*0.132*		*0.115*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*
Tl-208	*0.270*		*0.0635*	*0.0691*		*0.0473*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:23*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.449	U	2.45	2.45	5.00	4.24	pCi/g	04/02/21 07:05	04/09/21 01:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*30.2*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 01:55*	*1*

Client Sample ID: RA-012-031721

Lab Sample ID: 160-41496-14

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0314	U	0.135	0.135	3.00	0.245	pCi/g	03/25/21 09:08	04/07/21 17:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.2*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*
Y Carrier	*89.0*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0766	U	0.268	0.268	1.00	0.504	pCi/g	03/23/21 08:28	03/26/21 22:30	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0120	U	0.0200	0.0200	1.00	0.0704	pCi/g	04/01/21 12:36	04/23/21 12:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*91.3*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:40*	*1*

Client Sample ID: RA-012-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-14

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0155	U	0.0273	0.0274	1.00	0.0517	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	-0.00581	U	0.00657	0.00659	1.00	0.0479	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.8*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0378	U	0.0531	0.0532	1.00	0.0915	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.338**		0.113	0.117	1.00	0.0734	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.8*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0856	U	0.195	0.196		0.333	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Cesium-137	**0.246**		0.0745	0.0796		0.0611	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Cobalt-60	-0.0586	U	0.122	0.122		0.138	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Radium-226	**0.544**		0.141	0.154	1.00	0.112	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Europium-152	-0.0816	U	0.150	0.150		0.256	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Europium-154	0.0911	U	0.174	0.175		0.167	pCi/g	03/23/21 16:50	04/14/21 06:24	1
Potassium-40	**6.36**		1.18	1.38		0.422	pCi/g	03/23/21 16:50	04/14/21 06:24	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.746*		*0.206*	*0.222*		*0.108*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:24*	*1*
Bi-214	*0.544*		*0.141*	*0.154*		*0.112*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:24*	*1*
Pb-212	*0.705*		*0.118*	*0.143*		*0.121*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:24*	*1*
Pb-214	*0.487*		*0.124*	*0.136*		*0.139*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:24*	*1*
Tl-208	*0.226*		*0.0728*	*0.0772*		*0.0676*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:24*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.433	U	1.92	1.92	5.00	3.39	pCi/g	04/02/21 07:05	04/09/21 03:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*38.1*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 03:01*	*1*

Client Sample ID: RA-013-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-15

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.152	U	0.171	0.171	3.00	0.287	pCi/g	03/25/21 09:08	04/07/21 17:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.4*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*
Y Carrier	*93.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:59*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.166	U	0.258	0.258	1.00	0.501	pCi/g	03/23/21 08:28	03/26/21 22:53	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0211	U	0.0355	0.0356	1.00	0.0654	pCi/g	04/01/21 12:36	04/23/21 12:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*106*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:40*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0190	U	0.0312	0.0313	1.00	0.0572	pCi/g	04/01/21 13:02	04/26/21 13:21	1
Plutonium-239/240	0.000	U	0.0167	0.0167	1.00	0.0509	pCi/g	04/01/21 13:02	04/26/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*86.5*		*30 - 110*	*04/01/21 13:02*	*04/26/21 13:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0322	U	0.0402	0.0403	1.00	0.0567	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.364**		0.120	0.124	1.00	0.0905	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.1*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0163	U	0.124	0.124		0.186	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Cesium-137	0.0287	U	0.0871	0.0872		0.153	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Cobalt-60	0.0415	U	0.0783	0.0784		0.0942	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Radium-226	**0.466**		0.133	0.141	1.00	0.122	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Europium-152	0.0467	U	0.165	0.165		0.201	pCi/g	03/23/21 16:50	04/14/21 06:26	1

Client Sample ID: RA-013-031721

Lab Sample ID: 160-41496-15

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0611	U	0.0732	0.0735		0.152	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Potassium-40	**5.10**		1.18	1.28		0.507	pCi/g	03/23/21 16:50	04/14/21 06:26	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.706*		*0.175*	*0.189*		*0.126*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Bi-214	*0.466*		*0.133*	*0.141*		*0.122*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Pb-212	*0.691*		*0.118*	*0.147*		*0.117*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Pb-214	*0.432*		*0.131*	*0.138*		*0.134*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Tl-208	*0.262*		*0.0954*	*0.0990*		*0.0963*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.728	U	1.91	1.91	5.00	3.29	pCi/g	04/02/21 07:05	04/09/21 04:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*39.1*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 04:07*	*1*

Client Sample ID: RA-014-031721

Lab Sample ID: 160-41496-16

Date Collected: 03/17/21 11:00

Matrix: Solid

Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.217	U	0.146	0.147	3.00	0.228	pCi/g	03/25/21 09:08	04/07/21 17:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.5*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*
Y Carrier	*93.8*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:58*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.108	U	0.261	0.262	1.00	0.497	pCi/g	03/23/21 08:28	03/26/21 23:15	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0201	U	0.0342	0.0343	1.00	0.0918	pCi/g	04/01/21 12:36	04/26/21 13:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*92.0*		*30 - 110*	*04/01/21 12:36*	*04/26/21 13:29*	*1*

Client Sample ID: RA-014-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-16

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00736	U	0.0270	0.0270	1.00	0.0604	pCi/g	04/01/21 13:02	04/26/21 13:21	1
Plutonium-239/240	0.00552	U	0.0149	0.0149	1.00	0.0356	pCi/g	04/01/21 13:02	04/26/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.8*		*30 - 110*	*04/01/21 13:02*	*04/26/21 13:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0307	U	0.0383	0.0384	1.00	0.0540	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.378**		0.115	0.119	1.00	0.0554	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.6*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0877	U	0.152	0.153		0.258	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Cesium-137	**0.174**		0.0513	0.0543		0.0355	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Cobalt-60	0.0283	U	0.0226	0.0228		0.0348	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Radium-226	**0.507**		0.0993	0.112	1.00	0.0373	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Europium-152	0.00378	U	0.00548	0.00549		0.175	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Europium-154	0.0785	U	0.116	0.116		0.118	pCi/g	03/23/21 16:50	04/14/21 06:26	1
Potassium-40	**4.57**		0.957	1.06		0.569	pCi/g	03/23/21 16:50	04/14/21 06:26	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.728*		*0.218*	*0.229*		*0.333*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Bi-214	*0.507*		*0.0993*	*0.112*		*0.0373*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Pb-212	*0.554*		*0.100*	*0.122*		*0.124*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Pb-214	*0.440*		*0.101*	*0.110*		*0.0965*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*
Tl-208	*0.342*		*0.0682*	*0.0766*		*0.0381*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:26*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0899	U	1.89	1.89	5.00	3.31	pCi/g	04/02/21 07:05	04/09/21 05:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*38.8*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 05:13*	*1*

Client Sample ID: RA-015-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-17

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0473	U	0.150	0.150	3.00	0.267	pCi/g	03/25/21 09:08	04/07/21 17:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.9*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*
Y Carrier	*86.7*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:57*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.106	U	0.265	0.265	1.00	0.503	pCi/g	03/23/21 08:28	03/26/21 23:38	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0180	U	0.0280	0.0280	1.00	0.0494	pCi/g	04/01/21 12:36	04/23/21 12:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*88.4*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:40*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00948	U	0.0220	0.0220	1.00	0.0469	pCi/g	04/01/21 13:02	04/26/21 13:21	1
Plutonium-239/240	0.00949	U	0.0220	0.0220	1.00	0.0469	pCi/g	04/01/21 13:02	04/26/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.7*		*30 - 110*	*04/01/21 13:02*	*04/26/21 13:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0250	U	0.0442	0.0443	1.00	0.0836	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.409**		0.128	0.132	1.00	0.0714	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*84.9*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0279	U	0.168	0.168		0.233	pCi/g	03/23/21 16:50	04/14/21 06:37	1
Cesium-137	**0.271**		0.0674	0.0728		0.0479	pCi/g	03/23/21 16:50	04/14/21 06:37	1
Cobalt-60	-0.0110	U	0.0743	0.0743		0.0867	pCi/g	03/23/21 16:50	04/14/21 06:37	1
Radium-226	0.321	U	0.113	0.118	1.00	0.395	pCi/g	03/23/21 16:50	04/14/21 06:37	1
Europium-152	0.104	U	0.188	0.188		0.175	pCi/g	03/23/21 16:50	04/14/21 06:37	1

Client Sample ID: RA-015-031721

Lab Sample ID: 160-41496-17

Date Collected: 03/17/21 11:00
Matrix: Solid
Date Received: 03/18/21 09:25

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0787	U	0.127	0.127		0.112	pCi/g	03/23/21 16:50	04/14/21 06:37	1
Potassium-40	**4.08**		0.863	0.955		0.350	pCi/g	03/23/21 16:50	04/14/21 06:37	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.835*		*0.215*	*0.231*		*0.133*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:37*	*1*
Bi-212	*1.63*		*0.583*	*0.606*		*0.449*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:37*	*1*
Pb-212	*0.768*		*0.113*	*0.150*		*0.111*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:37*	*1*
Pb-214	*0.744*		*0.141*	*0.160*		*0.104*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:37*	*1*
Tl-208	*0.264*		*0.0627*	*0.0682*		*0.0431*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:37*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.113	U	1.79	1.79	5.00	3.12	pCi/g	04/02/21 07:05	04/09/21 06:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*41.3*		*40 - 110*	*04/02/21 07:05*	*04/09/21 06:19*	*1*

Client Sample ID: RA-016-031721

Lab Sample ID: 160-41496-18

Date Collected: 03/17/21 11:00
Matrix: Solid
Date Received: 03/18/21 09:25

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0426	U	0.137	0.137	3.00	0.244	pCi/g	03/25/21 09:08	04/07/21 17:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.1*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:42*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/25/21 09:08*	*04/07/21 17:42*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0560	U	0.261	0.262	1.00	0.487	pCi/g	03/23/21 08:28	03/27/21 00:01	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0130	U	0.0209	0.0209	1.00	0.0359	pCi/g	04/01/21 12:36	04/23/21 12:41	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*84.6*		*30 - 110*	*04/01/21 12:36*	*04/23/21 12:41*	*1*

Client Sample ID: RA-016-031721

Date Collected: 03/17/21 11:00
Date Received: 03/18/21 09:25

Lab Sample ID: 160-41496-18

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0160	0.0160	1.00	0.0488	pCi/g	04/01/21 13:02	04/26/21 13:21	1
Plutonium-239/240	0.00914	U	0.0212	0.0212	1.00	0.0452	pCi/g	04/01/21 13:02	04/26/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.8*		*30 - 110*	*04/01/21 13:02*	*04/26/21 13:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0109	U	0.0214	0.0214	1.00	0.0327	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	**0.398**		0.116	0.121	1.00	0.0490	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.3*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0771	U	0.183	0.183		0.312	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Cesium-137	**0.133**		0.0507	0.0524		0.0403	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Cobalt-60	**0.0668**		0.0395	0.0400		0.0447	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Radium-226	**0.610**		0.144	0.157	1.00	0.111	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Europium-152	0.0958	U	0.237	0.238		0.174	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Europium-154	0.0551	U	0.123	0.123		0.111	pCi/g	03/23/21 16:50	04/14/21 06:33	1
Potassium-40	**4.44**		1.06	1.15		0.606	pCi/g	03/23/21 16:50	04/14/21 06:33	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.857*		*0.222*	*0.238*		*0.111*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:33*	*1*
Bi-214	*0.610*		*0.144*	*0.157*		*0.111*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:33*	*1*
Pb-212	*0.740*		*0.110*	*0.133*		*0.106*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:33*	*1*
Pb-214	*0.621*		*0.137*	*0.150*		*0.128*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:33*	*1*
Tl-208	*0.314*		*0.0704*	*0.0770*		*0.0386*	*pCi/g*	*03/23/21 16:50*	*04/14/21 06:33*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-1.88	U	2.00	2.01	5.00	3.65	pCi/g	04/02/21 07:05	04/09/21 07:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*35.1*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/09/21 07:25*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-503169/21-A
Matrix: Solid
Analysis Batch: 504915

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 503169

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.01919	U	0.168	0.168	3.00	0.303	pCi/g	03/25/21 09:11	04/07/21 17:42	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.7*		*40 - 110*	*03/25/21 09:11*	*04/07/21 17:42*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/25/21 09:11*	*04/07/21 17:42*	*1*

Lab Sample ID: LCS 160-503169/1-A
Matrix: Solid
Analysis Batch: 504914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 503169

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.25	7.805		0.813	3.00	0.278	pCi/g	95	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.5*		*40 - 110*
Y Carrier	*82.2*		*40 - 110*

Lab Sample ID: 160-41496-1 DU
Matrix: Solid
Analysis Batch: 504914

Client Sample ID: RA-001-031721
Prep Type: Total/NA
Prep Batch: 503169

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.120	U		-0.1014	U	0.150	3.00	0.294	pCi/g			1.99	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*87.4*		*40 - 110*
Y Carrier	*84.5*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-502782/1-A
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502782

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.1327	U	0.244	0.244	1.00	0.468	pCi/g	03/23/21 08:28	03/26/21 16:06	1

Lab Sample ID: LCS 160-502782/2-A
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502782

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.82	6.949		0.878	1.00	0.476	pCi/g	89	80 - 114		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-41392-L-1-B MS
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 502782

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	0.0953	U	7.78	7.273		0.902	1.00	0.470	pCi/g	92	78 - 122

Lab Sample ID: 160-41496-18 DU
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: RA-016-031721
Prep Type: Total/NA
Prep Batch: 502782

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	-0.0560	U	-0.1802	U	0.254	1.00	0.496	pCi/g	0.67	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-504017/1-A
Matrix: Solid
Analysis Batch: 506673

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504017

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.003019	U	0.0454	0.0454	1.00	0.110	pCi/g	04/01/21 13:03	04/22/21 13:21	1
Uranium-238	0.01210	U	0.0462	0.0463	1.00	0.0980	pCi/g	04/01/21 13:03	04/22/21 13:21	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.0*		*30 - 110*	*04/01/21 13:03*	*04/22/21 13:21*	*1*

Lab Sample ID: LCS 160-504017/2-A
Matrix: Solid
Analysis Batch: 506674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504017

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-234	6.37	6.047		0.709	1.00	0.146	pCi/g	95	84 - 120
Uranium-238	6.51	6.000		0.702	1.00	0.0947	pCi/g	92	82 - 122

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*69.4*		*30 - 110*

Lab Sample ID: 160-41496-1 DU
Matrix: Solid
Analysis Batch: 506677

Client Sample ID: RA-001-031721
Prep Type: Total/NA
Prep Batch: 504017

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-235	0.00845	U	0.005359	U	0.0223	1.00	0.0600	pCi/g	0.13	3
Uranium-238	0.475		0.3481		0.113	1.00	0.0645	pCi/g	1.41	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*79.0*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-504016/1-A
Matrix: Solid
Analysis Batch: 506838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504016

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.01050	U	0.00920	0.00924	1.00	0.0597	pCi/g	04/01/21 13:02	04/23/21 12:43	1
Plutonium-239/240	0.02102	U	0.0291	0.0292	1.00	0.0471	pCi/g	04/01/21 13:02	04/23/21 12:43	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.5*		*30 - 110*	*04/01/21 13:02*	*04/23/21 12:43*	*1*

Lab Sample ID: LCS 160-504016/2-A
Matrix: Solid
Analysis Batch: 506839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504016

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.21	4.536		0.515	1.00	0.0482	pCi/g	87	80 - 125		
Plutonium-239/240			5.28	4.633		0.524	1.00	0.0513	pCi/g	88	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*93.6*		*30 - 110*

Lab Sample ID: 160-41496-1 DU
Matrix: Solid
Analysis Batch: 506842

Client Sample ID: RA-001-031721
Prep Type: Total/NA
Prep Batch: 504016

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.00901	U		0.01521	U	0.0269	1.00	0.0508	pCi/g			0.32	3
Plutonium-239/240	-0.0162	U		0.01713	U	0.0267	1.00	0.0471	pCi/g			2.28	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*96.9*		*30 - 110*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-504014/1-A
Matrix: Solid
Analysis Batch: 506704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504014

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.09433	U	0.0459	0.0470	1.00	0.146	pCi/g	04/01/21 12:36	04/22/21 13:22	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*84.4*		*30 - 110*	*04/01/21 12:36*	*04/22/21 13:22*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-504014/2-A
Matrix: Solid
Analysis Batch: 506705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504014

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			3.70	3.702		0.542	1.00	0.116	pCi/g	100	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*78.6*		*30 - 110*

Lab Sample ID: 160-41496-1 DU
Matrix: Solid
Analysis Batch: 506710

Client Sample ID: RA-001-031721
Prep Type: Total/NA
Prep Batch: 504014

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	0.0181	U		-0.03611	U	0.0302	1.00	0.0993	pCi/g			1.86	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Americium-243	*84.3*		*30 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-502826/1-A
Matrix: Solid
Analysis Batch: 505450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502826

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.006019	U	0.0959	0.0959		0.140	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Cesium-137	-0.04901	U	0.0858	0.0860		0.148	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Cobalt-60	0.02270	U	0.0182	0.0183		0.0806	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Radium-226	0.0000	U	0.0672	0.0672	1.00	0.307	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Europium-152	0.1022	U	0.0578	0.0588		0.123	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Europium-154	0.1258		0.0712	0.0723		0.0790	pCi/g	03/23/21 16:50	04/13/21 12:52	1
Potassium-40	0.1765	U	0.711	0.711		0.831	pCi/g	03/23/21 16:50	04/13/21 12:52	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*03/23/21 16:50*	*04/13/21 12:52*	*1*

Lab Sample ID: LCS 160-502826/2-A
Matrix: Solid
Analysis Batch: 505447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502826

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.4	97.90		10.1		1.23	pCi/g	102	87 - 116		
Cesium-137			26.5	27.44		2.90		0.228	pCi/g	103	87 - 120		
Cobalt-60			9.06	9.089		0.970		0.0587	pCi/g	100	87 - 115		

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-41496-18 DU
Matrix: Solid
Analysis Batch: 505608

Client Sample ID: RA-016-031721
Prep Type: Total/NA
Prep Batch: 502826

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Americium-241	0.0771	U	-0.06879	U	0.155		0.212	pCi/g	1.19	2
Cesium-137	0.133		0.04741	U	0.0788		0.134	pCi/g	1.78	2
Cobalt-60	0.0668		0.01391	U	0.0481		0.0576	pCi/g	1.66	2
Radium-226	0.610		0.5651		0.141	1.00	0.0872	pCi/g	0.42	2
Europium-152	0.0958	U	0.07897	U	0.0791		0.152	pCi/g	0.13	2
Europium-154	0.0551	U	0.06430	U	0.104		0.113	pCi/g	0.11	2
Potassium-40	4.44		5.715		1.12		0.310	pCi/g	1.56	2

Other Detected Radionuclides	*Sample Result*	*Sample Qual*	*DU Result*	*DU Qual*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*DER*	*DER Limit*
Ac-228	*0.857*		*0.6332*		*0.194*		*0.253*	*pCi/g*	*1.42*	*2*
Bi-212	*-0.317*	*U*	*1.189*		*0.510*		*0.412*	*pCi/g*	*2.86*	*2*
Bi-214	*0.610*		*0.5651*		*0.141*		*0.0872*	*pCi/g*	*0.42*	*2*
Pb-212	*0.740*		*0.7481*		*0.136*		*0.0765*	*pCi/g*	*0.08*	*2*
Pb-214	*0.621*		*0.6524*		*0.145*		*0.106*	*pCi/g*	*0.29*	*2*
Tl-208	*0.314*		*0.2896*		*0.0742*		*0.0467*	*pCi/g*	*0.44*	*2*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-504117/1-A
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504117

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.2849	U	1.14	1.14	5.00	1.96	pCi/g	04/02/21 07:05	04/08/21 08:16	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*65.4*		*40 - 110*	*04/02/21 07:05*	*04/08/21 08:16*	*1*

Lab Sample ID: LCS 160-504117/2-A
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504117

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-63	21.6	20.49		2.80	5.00	1.96	pCi/g	95	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni Carrier	*65.6*		*40 - 110*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-41496-1 DU
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: RA-001-031721
Prep Type: Total/NA
Prep Batch: 504117

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	-0.584	U		-0.08739	U	1.04	5.00	1.83	pCi/g			0.36	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni Carrier	*69.9*		*40 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

General Chemistry

Analysis Batch: 503821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	Moisture	
160-41496-2	RA-201-031721	Total/NA	Solid	Moisture	
160-41496-3	RA-002-031721	Total/NA	Solid	Moisture	
160-41496-4	RA-003-031721	Total/NA	Solid	Moisture	
160-41496-5	RA-004-031721	Total/NA	Solid	Moisture	
160-41496-6	RA-005-031721	Total/NA	Solid	Moisture	
160-41496-7	RA-006-031721	Total/NA	Solid	Moisture	
160-41496-8	RA-007-031721	Total/NA	Solid	Moisture	
160-41496-9	RA-008-031721	Total/NA	Solid	Moisture	
160-41496-10	RA-009-031721	Total/NA	Solid	Moisture	
160-41496-11	RA-010-031721	Total/NA	Solid	Moisture	
160-41496-12	RA-011-031721	Total/NA	Solid	Moisture	
160-41496-13	RA-211-031721	Total/NA	Solid	Moisture	
160-41496-14	RA-012-031721	Total/NA	Solid	Moisture	
160-41496-15	RA-013-031721	Total/NA	Solid	Moisture	
160-41496-16	RA-014-031721	Total/NA	Solid	Moisture	
160-41496-17	RA-015-031721	Total/NA	Solid	Moisture	
160-41496-18	RA-016-031721	Total/NA	Solid	Moisture	
160-41496-18 DU	RA-016-031721	Total/NA	Solid	Moisture	

Rad

Leach Batch: 502524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	Dry and Grind	
160-41496-2	RA-201-031721	Total/NA	Solid	Dry and Grind	
160-41496-3	RA-002-031721	Total/NA	Solid	Dry and Grind	
160-41496-4	RA-003-031721	Total/NA	Solid	Dry and Grind	
160-41496-5	RA-004-031721	Total/NA	Solid	Dry and Grind	
160-41496-6	RA-005-031721	Total/NA	Solid	Dry and Grind	
160-41496-7	RA-006-031721	Total/NA	Solid	Dry and Grind	
160-41496-8	RA-007-031721	Total/NA	Solid	Dry and Grind	
160-41496-9	RA-008-031721	Total/NA	Solid	Dry and Grind	
160-41496-10	RA-009-031721	Total/NA	Solid	Dry and Grind	
160-41496-11	RA-010-031721	Total/NA	Solid	Dry and Grind	
160-41496-12	RA-011-031721	Total/NA	Solid	Dry and Grind	
160-41496-13	RA-211-031721	Total/NA	Solid	Dry and Grind	
160-41496-14	RA-012-031721	Total/NA	Solid	Dry and Grind	
160-41496-15	RA-013-031721	Total/NA	Solid	Dry and Grind	
160-41496-16	RA-014-031721	Total/NA	Solid	Dry and Grind	
160-41496-17	RA-015-031721	Total/NA	Solid	Dry and Grind	
160-41496-18	RA-016-031721	Total/NA	Solid	Dry and Grind	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	Dry and Grind	
160-41496-18 DU	RA-016-031721	Total/NA	Solid	Dry and Grind	

Prep Batch: 502782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-2	RA-201-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-3	RA-002-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-4	RA-003-031721	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 502782 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-5	RA-004-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-6	RA-005-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-7	RA-006-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-8	RA-007-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-9	RA-008-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-10	RA-009-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-11	RA-010-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-12	RA-011-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-13	RA-211-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-14	RA-012-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-15	RA-013-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-16	RA-014-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-17	RA-015-031721	Total/NA	Solid	LSC_Dist_Susp	
160-41496-18	RA-016-031721	Total/NA	Solid	LSC_Dist_Susp	
MB 160-502782/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-502782/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-41392-L-1-B MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-41496-18 DU	RA-016-031721	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 502826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-2	RA-201-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-3	RA-002-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-4	RA-003-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-5	RA-004-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-6	RA-005-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-7	RA-006-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-8	RA-007-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-9	RA-008-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-10	RA-009-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-11	RA-010-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-12	RA-011-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-13	RA-211-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-14	RA-012-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-15	RA-013-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-16	RA-014-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-17	RA-015-031721	Total/NA	Solid	Fill_Geo-21	502524
160-41496-18	RA-016-031721	Total/NA	Solid	Fill_Geo-21	502524
MB 160-502826/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-502826/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-41496-18 DU	RA-016-031721	Total/NA	Solid	Fill_Geo-21	502524

Prep Batch: 503169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	DPS-7	502524
160-41496-2	RA-201-031721	Total/NA	Solid	DPS-7	502524
160-41496-3	RA-002-031721	Total/NA	Solid	DPS-7	502524
160-41496-4	RA-003-031721	Total/NA	Solid	DPS-7	502524
160-41496-5	RA-004-031721	Total/NA	Solid	DPS-7	502524
160-41496-6	RA-005-031721	Total/NA	Solid	DPS-7	502524

Rad (Continued)

Prep Batch: 503169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-7	RA-006-031721	Total/NA	Solid	DPS-7	502524
160-41496-8	RA-007-031721	Total/NA	Solid	DPS-7	502524
160-41496-9	RA-008-031721	Total/NA	Solid	DPS-7	502524
160-41496-10	RA-009-031721	Total/NA	Solid	DPS-7	502524
160-41496-11	RA-010-031721	Total/NA	Solid	DPS-7	502524
160-41496-12	RA-011-031721	Total/NA	Solid	DPS-7	502524
160-41496-13	RA-211-031721	Total/NA	Solid	DPS-7	502524
160-41496-14	RA-012-031721	Total/NA	Solid	DPS-7	502524
160-41496-15	RA-013-031721	Total/NA	Solid	DPS-7	502524
160-41496-16	RA-014-031721	Total/NA	Solid	DPS-7	502524
160-41496-17	RA-015-031721	Total/NA	Solid	DPS-7	502524
160-41496-18	RA-016-031721	Total/NA	Solid	DPS-7	502524
MB 160-503169/21-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-503169/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	DPS-7	502524

Prep Batch: 504014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	ExtChrom	502524
160-41496-2	RA-201-031721	Total/NA	Solid	ExtChrom	502524
160-41496-3	RA-002-031721	Total/NA	Solid	ExtChrom	502524
160-41496-4	RA-003-031721	Total/NA	Solid	ExtChrom	502524
160-41496-5	RA-004-031721	Total/NA	Solid	ExtChrom	502524
160-41496-6	RA-005-031721	Total/NA	Solid	ExtChrom	502524
160-41496-7	RA-006-031721	Total/NA	Solid	ExtChrom	502524
160-41496-8	RA-007-031721	Total/NA	Solid	ExtChrom	502524
160-41496-9	RA-008-031721	Total/NA	Solid	ExtChrom	502524
160-41496-10	RA-009-031721	Total/NA	Solid	ExtChrom	502524
160-41496-11	RA-010-031721	Total/NA	Solid	ExtChrom	502524
160-41496-12	RA-011-031721	Total/NA	Solid	ExtChrom	502524
160-41496-13	RA-211-031721	Total/NA	Solid	ExtChrom	502524
160-41496-14	RA-012-031721	Total/NA	Solid	ExtChrom	502524
160-41496-15	RA-013-031721	Total/NA	Solid	ExtChrom	502524
160-41496-16	RA-014-031721	Total/NA	Solid	ExtChrom	502524
160-41496-17	RA-015-031721	Total/NA	Solid	ExtChrom	502524
160-41496-18	RA-016-031721	Total/NA	Solid	ExtChrom	502524
MB 160-504014/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-504014/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	ExtChrom	502524

Prep Batch: 504016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	ExtChrom	502524
160-41496-2	RA-201-031721	Total/NA	Solid	ExtChrom	502524
160-41496-3	RA-002-031721	Total/NA	Solid	ExtChrom	502524
160-41496-4	RA-003-031721	Total/NA	Solid	ExtChrom	502524
160-41496-5	RA-004-031721	Total/NA	Solid	ExtChrom	502524
160-41496-6	RA-005-031721	Total/NA	Solid	ExtChrom	502524
160-41496-7	RA-006-031721	Total/NA	Solid	ExtChrom	502524
160-41496-8	RA-007-031721	Total/NA	Solid	ExtChrom	502524
160-41496-9	RA-008-031721	Total/NA	Solid	ExtChrom	502524

Rad (Continued)

Prep Batch: 504016 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-10	RA-009-031721	Total/NA	Solid	ExtChrom	502524
160-41496-11	RA-010-031721	Total/NA	Solid	ExtChrom	502524
160-41496-12	RA-011-031721	Total/NA	Solid	ExtChrom	502524
160-41496-13	RA-211-031721	Total/NA	Solid	ExtChrom	502524
160-41496-14	RA-012-031721	Total/NA	Solid	ExtChrom	502524
160-41496-15	RA-013-031721	Total/NA	Solid	ExtChrom	502524
160-41496-16	RA-014-031721	Total/NA	Solid	ExtChrom	502524
160-41496-17	RA-015-031721	Total/NA	Solid	ExtChrom	502524
160-41496-18	RA-016-031721	Total/NA	Solid	ExtChrom	502524
MB 160-504016/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-504016/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	ExtChrom	502524

Prep Batch: 504017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	ExtChrom	502524
160-41496-2	RA-201-031721	Total/NA	Solid	ExtChrom	502524
160-41496-3	RA-002-031721	Total/NA	Solid	ExtChrom	502524
160-41496-4	RA-003-031721	Total/NA	Solid	ExtChrom	502524
160-41496-5	RA-004-031721	Total/NA	Solid	ExtChrom	502524
160-41496-6	RA-005-031721	Total/NA	Solid	ExtChrom	502524
160-41496-7	RA-006-031721	Total/NA	Solid	ExtChrom	502524
160-41496-8	RA-007-031721	Total/NA	Solid	ExtChrom	502524
160-41496-9	RA-008-031721	Total/NA	Solid	ExtChrom	502524
160-41496-10	RA-009-031721	Total/NA	Solid	ExtChrom	502524
160-41496-11	RA-010-031721	Total/NA	Solid	ExtChrom	502524
160-41496-12	RA-011-031721	Total/NA	Solid	ExtChrom	502524
160-41496-13	RA-211-031721	Total/NA	Solid	ExtChrom	502524
160-41496-14	RA-012-031721	Total/NA	Solid	ExtChrom	502524
160-41496-15	RA-013-031721	Total/NA	Solid	ExtChrom	502524
160-41496-16	RA-014-031721	Total/NA	Solid	ExtChrom	502524
160-41496-17	RA-015-031721	Total/NA	Solid	ExtChrom	502524
160-41496-18	RA-016-031721	Total/NA	Solid	ExtChrom	502524
MB 160-504017/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-504017/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	ExtChrom	502524

Prep Batch: 504117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-1	RA-001-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-2	RA-201-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-3	RA-002-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-4	RA-003-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-5	RA-004-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-6	RA-005-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-7	RA-006-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-8	RA-007-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-9	RA-008-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-10	RA-009-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-11	RA-010-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-12	RA-011-031721	Total/NA	Solid	Ext_Chrom_LSC	502524

Rad (Continued)

Prep Batch: 504117 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-13	RA-211-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-14	RA-012-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-15	RA-013-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-16	RA-014-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-17	RA-015-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
160-41496-18	RA-016-031721	Total/NA	Solid	Ext_Chrom_LSC	502524
MB 160-504117/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-504117/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-41496-1 DU	RA-001-031721	Total/NA	Solid	Ext_Chrom_LSC	502524

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41496-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-41496-1	RA-001-031721	91.0	78.5
160-41496-1 DU	RA-001-031721	87.4	84.5
160-41496-2	RA-201-031721	81.5	88.2
160-41496-3	RA-002-031721	88.6	91.6
160-41496-4	RA-003-031721	84.4	93.8
160-41496-5	RA-004-031721	89.2	85.2
160-41496-6	RA-005-031721	85.9	85.2
160-41496-7	RA-006-031721	86.5	92.7
160-41496-8	RA-007-031721	89.5	90.5
160-41496-9	RA-008-031721	88.0	90.1
160-41496-10	RA-009-031721	81.7	90.1
160-41496-11	RA-010-031721	89.1	80.7
160-41496-12	RA-011-031721	88.9	93.8
160-41496-13	RA-211-031721	90.1	91.6
160-41496-14	RA-012-031721	89.2	89.0
160-41496-15	RA-013-031721	86.4	93.1
160-41496-16	RA-014-031721	84.5	93.8
160-41496-17	RA-015-031721	84.9	86.7
160-41496-18	RA-016-031721	86.1	92.7
LCS 160-503169/1-A	Lab Control Sample	89.5	82.2
MB 160-503169/21-A	Method Blank	81.7	92.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-41496-1	RA-001-031721	86.7
160-41496-1 DU	RA-001-031721	84.3
160-41496-2	RA-201-031721	114 Q
160-41496-3	RA-002-031721	104
160-41496-4	RA-003-031721	80.5
160-41496-5	RA-004-031721	81.9
160-41496-6	RA-005-031721	83.4
160-41496-7	RA-006-031721	91.5
160-41496-8	RA-007-031721	100
160-41496-9	RA-008-031721	107
160-41496-10	RA-009-031721	89.4
160-41496-11	RA-010-031721	88.9
160-41496-12	RA-011-031721	107
160-41496-13	RA-211-031721	92.3
160-41496-14	RA-012-031721	91.3
160-41496-15	RA-013-031721	106
160-41496-16	RA-014-031721	92.0
160-41496-17	RA-015-031721	88.4

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-41496-18	RA-016-031721	84.6
LCS 160-504014/2-A	Lab Control Sample	78.6
MB 160-504014/1-A	Method Blank	84.4

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41496-1	RA-001-031721	95.2
160-41496-1 DU	RA-001-031721	96.9
160-41496-2	RA-201-031721	102
160-41496-3	RA-002-031721	110
160-41496-4	RA-003-031721	110
160-41496-5	RA-004-031721	100
160-41496-6	RA-005-031721	92.4
160-41496-7	RA-006-031721	105
160-41496-8	RA-007-031721	93.3
160-41496-9	RA-008-031721	97.1
160-41496-10	RA-009-031721	92.5
160-41496-11	RA-010-031721	90.7
160-41496-12	RA-011-031721	90.5
160-41496-13	RA-211-031721	95.0
160-41496-14	RA-012-031721	88.8
160-41496-15	RA-013-031721	86.5
160-41496-16	RA-014-031721	89.8
160-41496-17	RA-015-031721	92.7
160-41496-18	RA-016-031721	89.8
LCS 160-504016/2-A	Lab Control Sample	93.6
MB 160-504016/1-A	Method Blank	83.5

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-41496-1	RA-001-031721	72.7
160-41496-1 DU	RA-001-031721	79.0
160-41496-2	RA-201-031721	77.9
160-41496-3	RA-002-031721	73.4
160-41496-4	RA-003-031721	71.6
160-41496-5	RA-004-031721	77.7
160-41496-6	RA-005-031721	85.2
160-41496-7	RA-006-031721	84.8

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-41496-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-41496-8	RA-007-031721	76.2						
160-41496-9	RA-008-031721	72.5						
160-41496-10	RA-009-031721	74.7						
160-41496-11	RA-010-031721	73.3						
160-41496-12	RA-011-031721	74.0						
160-41496-13	RA-211-031721	74.9						
160-41496-14	RA-012-031721	75.8						
160-41496-15	RA-013-031721	82.1						
160-41496-16	RA-014-031721	88.6						
160-41496-17	RA-015-031721	84.9						
160-41496-18	RA-016-031721	77.3						
LCS 160-504017/2-A	Lab Control Sample	69.4						
MB 160-504017/1-A	Method Blank	85.0						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-41496-1	RA-001-031721	29.2 Q						
160-41496-1 DU	RA-001-031721	69.9						
160-41496-2	RA-201-031721	35.5 Q						
160-41496-3	RA-002-031721	31.7 Q						
160-41496-4	RA-003-031721	39.3 Q						
160-41496-5	RA-004-031721	37.8 Q						
160-41496-6	RA-005-031721	36.1 Q						
160-41496-7	RA-006-031721	36.0 Q						
160-41496-8	RA-007-031721	37.6 Q						
160-41496-9	RA-008-031721	33.5 Q						
160-41496-10	RA-009-031721	38.8 Q						
160-41496-11	RA-010-031721	36.4 Q						
160-41496-12	RA-011-031721	32.2 Q						
160-41496-13	RA-211-031721	30.2 Q						
160-41496-14	RA-012-031721	38.1 Q						
160-41496-15	RA-013-031721	39.1 Q						
160-41496-16	RA-014-031721	38.8 Q						
160-41496-17	RA-015-031721	41.3						
160-41496-18	RA-016-031721	35.1 Q						
LCS 160-504117/2-A	Lab Control Sample	65.6						
MB 160-504117/1-A	Method Blank	65.4						

Tracer/Carrier Legend

Ni = Ni Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41700-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
5/21/2021 6:40:13 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-41700-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41700-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 4/14/2021 9:05 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1º C.

STRONTIUM-90 (GFPC)

Job ID: 160-41700-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6) and RA-022-041321 (160-41700-7) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 04/22/2021, prepared on 04/28/2021 and analyzed on 05/07/2021.

Preparation Batch 160-507507:
The samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix. The samples contained different sized rocks and pebbles: Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6), and RA-022-041321 (160-41700-7).

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

AMERICIUM 241 (ALPHA SPECTROMETRY)
Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6) and RA-022-041321 (160-41700-7) were analyzed for Americium 241 (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 04/22/2021, prepared on 05/01/2021 and analyzed on 05/12/2021.

Preparation Batch 160-508030:
The samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. The samples contained rocks of varying sizes: RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6), RA-022-041321 (160-41700-7), and (160-41700-A-1-F DU).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6) and RA-022-041321 (160-41700-7) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 04/22/2021, prepared on 05/01/2021 and analyzed on 05/12/2021.

Preparation Batch 160-508031:
The samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. The samples contained rocks of varying sizes: RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6), RA-022-041321 (160-41700-7), and (160-41700-A-1-F DU).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6) and RA-022-041321 (160-41700-7) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 04/22/2021, prepared on 05/01/2021 and analyzed on 05/12/2021 and 05/14/2021.

Preparation Batch 160-508032:
The samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. The samples contained rocks of varying sizes: RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6), RA-022-041321 (160-41700-7), and (160-41700-A-1-F DU).

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Job ID: 160-41700-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6) and RA-022-041321 (160-41700-7) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 04/22/2021, prepared on 04/26/2021 and analyzed on 05/17/2021.

Preparation Batch 160-507122:
The detection goal of 0.200 pCi/g was not met for Ra-226 for the following sample. An elevated DLC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, and the Ra-226 activity is below the RL and DLC: (190-25727-A-1-A) and (190-25727-A-1-B DU).

Insufficient sample was available after the dry and grind preparation to fill the standard geometry (tuna can) calibrated for Ra-226 analysis by gamma spectroscopy. The use of a geometry with headspace could potentially bias the results low due to the loss of radon into the headspace of the container. The Ra-226 detection goal was not met due to the reduced aliquot: RA-018-041321 (160-41700-2).

For samples RA-017-041321 (160-41700-1), RA-018-041321 (160-41700-2), RA-019-041321 (160-41700-3), RA-020-041321 (160-41700-4), RA-220-041321 (160-41700-5), RA-021-041321 (160-41700-6), RA-022-041321 (160-41700-7), (LCS 160-507122/2-A), (MB 160-507122/1-A), (190-25727-A-1-A), and (190-25727-A-1-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 04-13-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Alpha Spec - Am-241	Alpha Spec - Pu-238, Pu-239/240	Alpha Spec - U-234, 235, 238	Strontium-90 (GFPC)		Tritium (LSC)				Sample Specific Notes:
RA-017-041321	13-Apr	12:50	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-018-041321	13-Apr	13:05	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-019-041321	13-Apr	13:18	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-020-041321	13-Apr	13:32	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-220-041321	13-Apr	13:44	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-021-041321	13-Apr	14:00	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
RA-022-041321	13-Apr	14:10	G	S	1	N	N	1	1	1	1	1		1				Concrete Core
																		All samples taken from Bldg. 610 North Side garage door.
																		Please grind and subsample each core.

160-41700 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services, Inc.	Date/Time:04-13-21 17:00	Received by: Fed Ex FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: EJA SVL	Date/Time: 4/14/21 0905
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41700-1

Login Number: 41700
List Number: 1
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41700-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Method	Method Description	Protocol	Laboratory
905	Strontium-90 (GFPC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

None = None

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-41700-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41700-1	RA-017-041321	Solid	04/13/21 12:50	04/14/21 09:05	
160-41700-2	RA-018-041321	Solid	04/13/21 13:05	04/14/21 09:05	
160-41700-3	RA-019-041321	Solid	04/13/21 13:18	04/14/21 09:05	
160-41700-4	RA-020-041321	Solid	04/13/21 13:32	04/14/21 09:05	
160-41700-5	RA-220-041321	Solid	04/13/21 13:44	04/14/21 09:05	
160-41700-6	RA-021-041321	Solid	04/13/21 14:00	04/14/21 09:05	
160-41700-7	RA-022-041321	Solid	04/13/21 14:10	04/14/21 09:05	

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Client Sample ID: RA-017-041321

Date Collected: 04/13/21 12:50
Date Received: 04/14/21 09:05

Lab Sample ID: 160-41700-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.199	U	0.151	0.152	3.00	0.241	pCi/g	04/28/21 12:20	05/07/21 14:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.6*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:58*	*1*
Y Carrier	*91.6*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:58*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0168	U	0.0396	0.0396	1.00	0.0789	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*80.9*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0293	U	0.0239	0.0241	1.00	0.0905	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	0.00210	U	0.0365	0.0365	1.00	0.0849	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*96.1*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00312	U	0.0267	0.0267	1.00	0.0773	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.278**		0.106	0.109	1.00	0.0713	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.7*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0845	U	0.180	0.180		0.148	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Cesium-137	-0.00888	U	0.0590	0.0590		0.0488	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Cobalt-60	0.00779	U	0.0777	0.0777		0.0390	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Radium-226	0.168	U	0.111	0.112	0.200	0.170	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Europium-152	**0.121**		0.169	0.169		0.101	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Europium-154	**0.0856**		0.0677	0.0683		0.0649	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Europium-155	0.124	U	0.424	0.424		0.354	pCi/g	04/26/21 16:54	05/17/21 20:03	1

Client Sample ID: RA-017-041321

Lab Sample ID: 160-41700-1

Date Collected: 04/13/21 12:50

Matrix: Solid

Date Received: 04/14/21 09:05

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Ac-228	1.21		0.243	0.271		0.0294	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Bi-212	2.38		0.737	0.776		0.205	pCi/g	04/26/21 16:54	05/17/21 20:03	1
K-40	6.21		1.15	1.31		0.301	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Pb-212	1.04		0.126	0.183		0.0463	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Pb-214	0.479		0.138	0.146		0.0616	pCi/g	04/26/21 16:54	05/17/21 20:03	1
Tl-208	0.437		0.0747	0.0869		0.0153	pCi/g	04/26/21 16:54	05/17/21 20:03	1

Client Sample ID: RA-018-041321

Lab Sample ID: 160-41700-2

Date Collected: 04/13/21 13:05

Matrix: Solid

Date Received: 04/14/21 09:05

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0273	U	0.179	0.179	3.00	0.332	pCi/g	04/28/21 12:20	05/07/21 14:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	76.2		40 - 110	04/28/21 12:20	05/07/21 14:58	1
Y Carrier	92.0		40 - 110	04/28/21 12:20	05/07/21 14:58	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00725	U	0.0284	0.0284	1.00	0.0751	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Americium-243	97.0		30 - 110	05/01/21 13:46	05/12/21 12:29	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0101	U	0.0266	0.0266	1.00	0.0778	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	0.0364	U	0.0359	0.0360	1.00	0.0453	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	101		30 - 110	05/01/21 13:58	05/12/21 12:32	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0354**		0.0401	0.0402	1.00	0.0354	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.234**		0.0975	0.0993	1.00	0.0807	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	87.9		30 - 110	05/01/21 14:00	05/12/21 12:42	1

Client Sample ID: RA-018-041321

Lab Sample ID: 160-41700-2
Matrix: Solid
Date Collected: 04/13/21 13:05
Date Received: 04/14/21 09:05

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0498	U	0.316	0.316		0.264	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Cesium-137	-0.00816	U	0.107	0.107		0.0892	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Cobalt-60	-0.0123	U	0.0588	0.0589		0.0912	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Radium-226	0.264	U	0.183	0.185	0.200	0.440	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Europium-152	0.144	U	0.379	0.379		0.151	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Europium-154	0.0458	U	0.0572	0.0574		0.125	pCi/g	04/26/21 16:54	05/17/21 20:04	1
Europium-155	0.000	U	0.200	0.200		0.236	pCi/g	04/26/21 16:54	05/17/21 20:04	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*7.50*		*1.84*	*1.98*		*0.273*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:04*	*1*
Pb-212	*0.549*		*0.154*	*0.164*		*0.0737*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:04*	*1*
Pb-214	*0.656*		*0.187*	*0.198*		*0.0973*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:04*	*1*
Tl-208	*0.327*		*0.0978*	*0.103*		*0.0175*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:04*	*1*

Client Sample ID: RA-019-041321

Lab Sample ID: 160-41700-3
Matrix: Solid
Date Collected: 04/13/21 13:18
Date Received: 04/14/21 09:05

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.334**		0.199	0.200	3.00	0.307	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.6*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*87.9*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.00207	U	0.0443	0.0443	1.00	0.0980	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*85.0*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00215	U	0.0419	0.0419	1.00	0.0946	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	-0.0365	U	0.0174	0.0176	1.00	0.0910	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.9*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:32*	*1*

Client Sample ID: RA-019-041321

Lab Sample ID: 160-41700-3

Date Collected: 04/13/21 13:18

Matrix: Solid

Date Received: 04/14/21 09:05

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00979	U	0.0111	0.0111	1.00	0.0808	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.220**		0.0940	0.0958	1.00	0.0314	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.7*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	**0.0760**		0.110	0.110		0.0739	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Cesium-137	0.0230	U	0.0910	0.0910		0.0740	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Cobalt-60	-0.0415	U	0.0916	0.0917		0.0631	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Radium-226	0.0259	U	0.199	0.199	0.200	0.165	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Europium-152	0.0426	U	0.0796	0.0797		0.0950	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Europium-154	**0.0688**		0.146	0.146		0.0560	pCi/g	04/26/21 16:54	05/17/21 20:01	1
Europium-155	0.0303	U	0.207	0.207		0.173	pCi/g	04/26/21 16:54	05/17/21 20:01	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*7.15*		*1.56*	*1.71*		*0.333*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:01*	*1*
Pb-212	*0.420*		*0.0992*	*0.113*		*0.0426*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:01*	*1*
Pb-214	*0.370*		*0.111*	*0.117*		*0.0520*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:01*	*1*
Tl-208	*0.239*		*0.0668*	*0.0711*		*0.0112*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:01*	*1*

Client Sample ID: RA-020-041321

Lab Sample ID: 160-41700-4

Date Collected: 04/13/21 13:32

Matrix: Solid

Date Received: 04/14/21 09:05

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0286	U	0.162	0.162	3.00	0.302	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.5*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*90.5*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0538	U	0.0513	0.0517	1.00	0.0767	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*90.3*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Client Sample ID: RA-020-041321
Lab Sample ID: 160-41700-4
Date Collected: 04/13/21 13:32
Matrix: Solid
Date Received: 04/14/21 09:05

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00596	U	0.0255	0.0255	1.00	0.0723	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	0.0119	U	0.0286	0.0287	1.00	0.0597	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.3*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0446	U	0.0470	0.0472	1.00	0.0576	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.131**		0.0702	0.0710	1.00	0.0462	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.7*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0468	U	0.103	0.103		0.0843	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Cesium-137	-0.0323	U	0.0528	0.0529		0.0416	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Cobalt-60	0.00925	U	0.0162	0.0163		0.0225	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Radium-226	**0.237**		0.0948	0.0979	0.200	0.0390	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-152	0.114	U	0.0792	0.0800		0.150	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-154	0.0273	U	0.0366	0.0367		0.0479	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-155	0.000	U	0.0528	0.0528		0.229	pCi/g	04/26/21 16:54	05/17/21 20:06	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Bi-214	*0.237*		*0.0948*	*0.0979*		*0.0390*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
K-40	*4.44*		*1.11*	*1.19*		*0.399*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Pb-212	*0.290*		*0.0606*	*0.0708*		*0.0230*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Pb-214	*0.325*		*0.0895*	*0.0954*		*0.0405*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Tl-208	*0.0773*		*0.0367*	*0.0376*		*0.0136*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*

Client Sample ID: RA-220-041321
Lab Sample ID: 160-41700-5
Date Collected: 04/13/21 13:44
Matrix: Solid
Date Received: 04/14/21 09:05

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0704	U	0.181	0.181	3.00	0.319	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.2*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*89.0*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Client Sample ID: RA-220-041321

Date Collected: 04/13/21 13:44
Date Received: 04/14/21 09:05

Lab Sample ID: 160-41700-5

Matrix: Solid

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0234	U	0.0325	0.0326	1.00	0.0938	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*97.3*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0262	U	0.0353	0.0353	1.00	0.0583	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	0.0131	U	0.0250	0.0250	1.00	0.0489	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*76.5*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00574	U	0.00796	0.00797	1.00	0.0643	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.134**		0.0702	0.0710	1.00	0.0516	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.2*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0106	U	0.198	0.198		0.166	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Cesium-137	0.0313	U	0.0884	0.0885		0.0716	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Cobalt-60	**0.0403**		0.0512	0.0514		0.0355	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Radium-226	**0.463**		0.171	0.179	0.200	0.0671	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-152	**0.297**		0.125	0.129		0.135	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-154	0.0543	U	0.136	0.136		0.0963	pCi/g	04/26/21 16:54	05/17/21 20:06	1
Europium-155	0.0401	U	0.115	0.115		0.354	pCi/g	04/26/21 16:54	05/17/21 20:06	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.817*		*0.237*	*0.254*		*0.0397*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Bi-214	*0.463*		*0.171*	*0.179*		*0.0671*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
K-40	*10.0*		*1.67*	*2.01*		*0.402*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Pb-212	*0.642*		*0.130*	*0.150*		*0.0689*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Pb-214	*0.566*		*0.122*	*0.138*		*0.0554*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*
Tl-208	*0.218*		*0.0641*	*0.0687*		*0.0195*	*pCi/g*	*04/26/21 16:54*	*05/17/21 20:06*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Client Sample ID: RA-021-041321

Date Collected: 04/13/21 14:00
Date Received: 04/14/21 09:05

Lab Sample ID: 160-41700-6

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.106	U	0.183	0.183	3.00	0.318	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.7*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*89.3*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.00585	U	0.0232	0.0232	1.00	0.0555	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*93.4*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00210	U	0.0316	0.0316	1.00	0.0765	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	-0.00421	U	0.0193	0.0193	1.00	0.0631	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.9*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0212	U	0.0403	0.0404	1.00	0.0791	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	**0.348**		0.124	0.127	1.00	0.0548	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*62.6*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0911	U	0.153	0.154		0.117	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Cesium-137	-0.0212	U	0.0863	0.0864		0.0721	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Cobalt-60	0.00161	U	0.00284	0.00285		0.0653	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Radium-226	**0.429**		0.136	0.142	0.200	0.0422	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Europium-152	**0.159**		0.156	0.157		0.0955	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Europium-154	**0.128**		0.164	0.164		0.0627	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Europium-155	0.0614	U	0.195	0.195		0.160	pCi/g	04/26/21 16:54	05/17/21 21:22	1

Client Sample ID: RA-021-041321

Lab Sample ID: 160-41700-6

Date Collected: 04/13/21 14:00
Matrix: Solid
Date Received: 04/14/21 09:05

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Bi-214	0.429		0.136	0.142		0.0422	pCi/g	04/26/21 16:54	05/17/21 21:22	1
K-40	8.59		1.73	1.93		0.345	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Pb-212	0.443		0.103	0.117		0.0429	pCi/g	04/26/21 16:54	05/17/21 21:22	1
Pb-214	0.417		0.126	0.133		0.0519	pCi/g	04/26/21 16:54	05/17/21 21:22	1

Client Sample ID: RA-022-041321

Lab Sample ID: 160-41700-7

Date Collected: 04/13/21 14:10
Matrix: Solid
Date Received: 04/14/21 09:05

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.00379	U	0.178	0.178	3.00	0.327	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	76.4		40 - 110	04/28/21 12:20	05/07/21 14:59	1
Y Carrier	90.5		40 - 110	04/28/21 12:20	05/07/21 14:59	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.00188	U	0.0160	0.0160	1.00	0.0464	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Americium-243	102		30 - 110	05/01/21 13:46	05/12/21 12:29	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0148	U	0.0109	0.0110	1.00	0.0664	pCi/g	05/01/21 13:58	05/12/21 12:32	1
Plutonium-239/240	-0.0106	U	0.00926	0.00930	1.00	0.0601	pCi/g	05/01/21 13:58	05/12/21 12:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	79.7		30 - 110	05/01/21 13:58	05/12/21 12:32	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00596	U	0.0248	0.0248	1.00	0.0667	pCi/g	05/01/21 14:00	05/14/21 20:23	1
Uranium-238	**0.291**		0.104	0.107	1.00	0.0535	pCi/g	05/01/21 14:00	05/14/21 20:23	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	87.8		30 - 110	05/01/21 14:00	05/14/21 20:23	1

Client Sample ID: RA-022-041321
Lab Sample ID: 160-41700-7

Date Collected: 04/13/21 14:10
Matrix: Solid

Date Received: 04/14/21 09:05

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0214	U	0.156	0.156		0.0984	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Cesium-137	0.0300	U	0.0492	0.0493		0.0380	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Cobalt-60	**0.0295**		0.0569	0.0570		0.0265	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Radium-226	**0.438**		0.120	0.128	0.200	0.0474	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Europium-152	0.0611	U	0.104	0.105		0.0808	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Europium-154	**0.190**		0.0743	0.0768		0.0529	pCi/g	04/26/21 16:54	05/17/21 21:23	1
Europium-155	0.0839	U	0.275	0.275		0.229	pCi/g	04/26/21 16:54	05/17/21 21:23	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.628*		*0.207*	*0.216*		*0.0629*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*
Bi-214	*0.438*		*0.120*	*0.128*		*0.0474*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*
K-40	*9.61*		*1.37*	*1.68*		*0.288*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*
Pb-212	*0.576*		*0.0983*	*0.122*		*0.0447*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*
Pb-214	*0.493*		*0.103*	*0.115*		*0.0515*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*
Tl-208	*0.235*		*0.0549*	*0.0599*		*0.0147*	*pCi/g*	*04/26/21 16:54*	*05/17/21 21:23*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-507507/11-A
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507507

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.2521	U	0.187	0.188	3.00	0.299	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.8*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*92.0*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Lab Sample ID: LCS 160-507507/1-A
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507507

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.24	7.876		0.831	3.00	0.284	pCi/g	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*83.0*		*40 - 110*
Y Carrier	*91.2*		*40 - 110*

Lab Sample ID: 160-41700-7 DU
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: RA-022-041321
Prep Type: Total/NA
Prep Batch: 507507

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.00379	U		0.1270	U	0.176	3.00	0.300	pCi/g			1.03	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*80.2*		*40 - 110*
Y Carrier	*92.3*		*40 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-508032/1-A
Matrix: Solid
Analysis Batch: 509430

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508032

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.002628	U	0.00515	0.00516	1.00	0.0509	pCi/g	05/01/21 14:00	05/12/21 12:42	1
Uranium-238	0.01686	U	0.0298	0.0298	1.00	0.0563	pCi/g	05/01/21 14:00	05/12/21 12:42	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.4*		*30 - 110*	*05/01/21 14:00*	*05/12/21 12:42*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-508032/2-A
Matrix: Solid
Analysis Batch: 509431

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508032

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.611		0.769	1.00	0.111	pCi/g	104	84 - 120
Uranium-238	6.51	7.366		0.833	1.00	0.0644	pCi/g	113	82 - 122

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*68.2*		*30 - 110*

Lab Sample ID: 160-41700-1 DU
Matrix: Solid
Analysis Batch: 509433

Client Sample ID: RA-017-041321
Prep Type: Total/NA
Prep Batch: 508032

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-235	0.00312	U	-0.00288	U	0.00567	1.00	0.0559	pCi/g	0.43	3
Uranium-238	0.278		0.2109		0.0890	1.00	0.0449	pCi/g	0.94	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*85.3*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-508031/1-A
Matrix: Solid
Analysis Batch: 509419

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508031

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.004258	U	0.0270	0.0270	1.00	0.0751	pCi/g	05/01/21 13:58	05/12/21 12:31	1
Plutonium-239/240	-0.002131	U	0.0191	0.0191	1.00	0.0606	pCi/g	05/01/21 13:58	05/12/21 12:31	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*96.2*		*30 - 110*	*05/01/21 13:58*	*05/12/21 12:31*	*1*

Lab Sample ID: LCS 160-508031/2-A
Matrix: Solid
Analysis Batch: 509735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508031

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.21	4.886		0.560	1.00	0.0711	pCi/g	94	80 - 125
Plutonium-239/240	5.28	5.288		0.595	1.00	0.0574	pCi/g	100	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*102*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-41700-1 DU
Matrix: Solid
Analysis Batch: 509422

Client Sample ID: RA-017-041321
Prep Type: Total/NA
Prep Batch: 508031

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.0293	U		0.008104	U	0.0297	1.00	0.0665	pCi/g			1.92	3
Plutonium-239/240	0.00210	U		0.002028	U	0.0173	1.00	0.0502	pCi/g			0	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*91.4*		*30 - 110*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-508030/1-A
Matrix: Solid
Analysis Batch: 509451

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508030

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.01988	U	0.0477	0.0478	1.00	0.114	pCi/g	05/01/21 13:46	05/12/21 12:29	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*106*		*30 - 110*	*05/01/21 13:46*	*05/12/21 12:29*	*1*

Lab Sample ID: LCS 160-508030/2-A
Matrix: Solid
Analysis Batch: 509452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508030

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			3.70	3.617		0.508	1.00	0.101	pCi/g	98	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*101*		*30 - 110*

Lab Sample ID: 160-41700-1 DU
Matrix: Solid
Analysis Batch: 509456

Client Sample ID: RA-017-041321
Prep Type: Total/NA
Prep Batch: 508030

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	0.0168	U		-0.02272	U	0.0387	1.00	0.104	pCi/g			1.40	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Americium-243	*83.4*		*30 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-507122/1-A
Matrix: Solid
Analysis Batch: 509952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507122

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.06213	U	0.147	0.148		0.120	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Cesium-137	0.008714	U	0.0859	0.0859		0.0713	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Cobalt-60	-0.08775	U	0.151	0.152		0.0744	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Radium-226	0.01759	U	0.215	0.215	0.200	0.179	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Europium-152	0.1099		0.135	0.136		0.0829	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Europium-154	0.01495	U	0.0568	0.0568		0.0666	pCi/g	04/26/21 16:54	05/17/21 22:37	1
Europium-155	0.03520	U	0.0888	0.0889		0.272	pCi/g	04/26/21 16:54	05/17/21 22:37	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*04/26/21 16:54*	*05/17/21 22:37*	*1*

Lab Sample ID: LCS 160-507122/2-A
Matrix: Solid
Analysis Batch: 509961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507122

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit	%Rec	%Rec. Limits		
Americium-241			96.4	92.57		9.53		0.525	pCi/g	96	87 - 116		
Cesium-137			26.5	25.33		2.64		0.0838	pCi/g	96	87 - 120		
Cobalt-60			8.95	8.392		0.867		0.0310	pCi/g	94	87 - 115		

Lab Sample ID: 190-25727-A-1-B DU
Matrix: Solid
Analysis Batch: 510138

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 507122

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	DLC	Unit			DER	DER Limit
Americium-241	-0.0623	U		-0.04135	U	0.112		0.0913	pCi/g			0.19	2
Cesium-137	-0.0438	U		0.005634	U	0.0459		0.0377	pCi/g			0.95	2
Cobalt-60	0.00284	U		-0.03368	U	0.0566		0.0489	pCi/g			0.65	2
Radium-226	-0.0844	U		0.03241	U	0.0412	0.200	0.201	pCi/g			1.04	2
Europium-152	0.275			0.1459		0.0875		0.0654	pCi/g			1.54	2
Europium-154	0.198			0.1430		0.0677		0.0535	pCi/g			0.93	2
Europium-155	0.0000000315	U		0.0000	U	0.0507		0.198	pCi/g			0	2

Other Detected Radionuclides	*Sample Result*	*Sample Qual*		*DU Result*	*DU Qual*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*DLC*	*Unit*			*DER*	*DER Limit*
Other Detected Radionuclide	*None*			*None*					*pCi/g*				

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Rad

Leach Batch: 506573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	Dry and Grind	
160-41700-2	RA-018-041321	Total/NA	Solid	Dry and Grind	
160-41700-3	RA-019-041321	Total/NA	Solid	Dry and Grind	
160-41700-4	RA-020-041321	Total/NA	Solid	Dry and Grind	
160-41700-5	RA-220-041321	Total/NA	Solid	Dry and Grind	
160-41700-6	RA-021-041321	Total/NA	Solid	Dry and Grind	
160-41700-7	RA-022-041321	Total/NA	Solid	Dry and Grind	
160-41700-1 DU	RA-017-041321	Total/NA	Solid	Dry and Grind	
160-41700-7 DU	RA-022-041321	Total/NA	Solid	Dry and Grind	

Prep Batch: 507122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-2	RA-018-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-3	RA-019-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-4	RA-020-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-5	RA-220-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-6	RA-021-041321	Total/NA	Solid	Fill_Geo-21	506573
160-41700-7	RA-022-041321	Total/NA	Solid	Fill_Geo-21	506573
MB 160-507122/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-507122/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
190-25727-A-1-B DU	Duplicate	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 507507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	DPS-7	506573
160-41700-2	RA-018-041321	Total/NA	Solid	DPS-7	506573
160-41700-3	RA-019-041321	Total/NA	Solid	DPS-7	506573
160-41700-4	RA-020-041321	Total/NA	Solid	DPS-7	506573
160-41700-5	RA-220-041321	Total/NA	Solid	DPS-7	506573
160-41700-6	RA-021-041321	Total/NA	Solid	DPS-7	506573
160-41700-7	RA-022-041321	Total/NA	Solid	DPS-7	506573
MB 160-507507/11-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-507507/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-41700-7 DU	RA-022-041321	Total/NA	Solid	DPS-7	506573

Prep Batch: 508030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	ExtChrom	506573
160-41700-2	RA-018-041321	Total/NA	Solid	ExtChrom	506573
160-41700-3	RA-019-041321	Total/NA	Solid	ExtChrom	506573
160-41700-4	RA-020-041321	Total/NA	Solid	ExtChrom	506573
160-41700-5	RA-220-041321	Total/NA	Solid	ExtChrom	506573
160-41700-6	RA-021-041321	Total/NA	Solid	ExtChrom	506573
160-41700-7	RA-022-041321	Total/NA	Solid	ExtChrom	506573
MB 160-508030/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-508030/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41700-1 DU	RA-017-041321	Total/NA	Solid	ExtChrom	506573

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-41700-1
Project/Site: BNL Decommissioning Project

Rad

Prep Batch: 508031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	ExtChrom	506573
160-41700-2	RA-018-041321	Total/NA	Solid	ExtChrom	506573
160-41700-3	RA-019-041321	Total/NA	Solid	ExtChrom	506573
160-41700-4	RA-020-041321	Total/NA	Solid	ExtChrom	506573
160-41700-5	RA-220-041321	Total/NA	Solid	ExtChrom	506573
160-41700-6	RA-021-041321	Total/NA	Solid	ExtChrom	506573
160-41700-7	RA-022-041321	Total/NA	Solid	ExtChrom	506573
MB 160-508031/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-508031/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41700-1 DU	RA-017-041321	Total/NA	Solid	ExtChrom	506573

Prep Batch: 508032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-1	RA-017-041321	Total/NA	Solid	ExtChrom	506573
160-41700-2	RA-018-041321	Total/NA	Solid	ExtChrom	506573
160-41700-3	RA-019-041321	Total/NA	Solid	ExtChrom	506573
160-41700-4	RA-020-041321	Total/NA	Solid	ExtChrom	506573
160-41700-5	RA-220-041321	Total/NA	Solid	ExtChrom	506573
160-41700-6	RA-021-041321	Total/NA	Solid	ExtChrom	506573
160-41700-7	RA-022-041321	Total/NA	Solid	ExtChrom	506573
MB 160-508032/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-508032/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41700-1 DU	RA-017-041321	Total/NA	Solid	ExtChrom	506573

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-41700-1	RA-017-041321	81.6	91.6
160-41700-2	RA-018-041321	76.2	92.0
160-41700-3	RA-019-041321	81.6	87.9
160-41700-4	RA-020-041321	80.5	90.5
160-41700-5	RA-220-041321	81.2	89.0
160-41700-6	RA-021-041321	80.7	89.3
160-41700-7	RA-022-041321	76.4	90.5
160-41700-7 DU	RA-022-041321	80.2	92.3
LCS 160-507507/1-A	Lab Control Sample	83.0	91.2
MB 160-507507/11-A	Method Blank	78.8	92.0

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-41700-1	RA-017-041321	80.9
160-41700-1 DU	RA-017-041321	83.4
160-41700-2	RA-018-041321	97.0
160-41700-3	RA-019-041321	85.0
160-41700-4	RA-020-041321	90.3
160-41700-5	RA-220-041321	97.3
160-41700-6	RA-021-041321	93.4
160-41700-7	RA-022-041321	102
LCS 160-508030/2-A	Lab Control Sample	101
MB 160-508030/1-A	Method Blank	106

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41700-1	RA-017-041321	96.1
160-41700-1 DU	RA-017-041321	91.4
160-41700-2	RA-018-041321	101
160-41700-3	RA-019-041321	91.9
160-41700-4	RA-020-041321	88.3
160-41700-5	RA-220-041321	76.5
160-41700-6	RA-021-041321	83.9
160-41700-7	RA-022-041321	79.7
LCS 160-508031/2-A	Lab Control Sample	102
MB 160-508031/1-A	Method Blank	96.2

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41700-1

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**U-232 (30-110)**
160-41700-1	RA-017-041321	72.7
160-41700-1 DU	RA-017-041321	85.3
160-41700-2	RA-018-041321	87.9
160-41700-3	RA-019-041321	81.7
160-41700-4	RA-020-041321	77.7
160-41700-5	RA-220-041321	91.2
160-41700-6	RA-021-041321	62.6
160-41700-7	RA-022-041321	87.8
LCS 160-508032/2-A	Lab Control Sample	68.2
MB 160-508032/1-A	Method Blank	83.4

Tracer/Carrier Legend

U-232 = Uranium-232

A-3
CAMP Data

ANALYTICAL REPORT

Job Number: 160-39520-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
9/21/2020 6:43 PM

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09/21/2020
Revision: 1

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-39520-1 - Revision 1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. This revision adds the correct data for the asbestos analysis.

RECEIPT

The Pb samples were direct shipped to ETA Phoenix and arrived on 9/10/2020 10:00 AM at ambient temperature. The asbestos samples were direct shipped to J3 Resources, Inc and arrived on 9/10/2020 11:20 AM at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes.

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39520-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39520-1	C090220N	Air	09/02/20 18:07	09/10/20 10:00	
160-39520-2	C090120W	Air	09/01/20 18:05	09/10/20 10:00	
160-39520-3	C0827N	Air	08/27/20 17:25	09/10/20 10:00	
160-39520-4	C0828E	Air	08/28/20 16:20	09/10/20 10:00	
160-39520-5	C083120W	Air	08/31/20 16:45	09/10/20 10:00	
160-39520-6	C082920X	Air	08/29/20 16:00	09/10/20 10:00	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-148816-1
Client Project/Site: BNL Demolition

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
9/18/2020 2:20:20 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Demolition

Job ID: 550-148816-1

Job ID: 550-148816-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-148816-1

Comments
No additional comments.

Receipt
The samples were received on 9/10/2020 10:00 AM; the samples arrived in good condition.

Receipt Exceptions

Calculated sample volumes from the sample times listed on the samples labels.
Asbestos and metals were requested on the coc, We only received media for metals.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-219906 and analytical batch 550-220232.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Demolition

Job ID: 550-148816-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-148816-1	C090220N	Air	09/02/20 00:00	09/10/20 10:00	
550-148816-2	C090120W	Air	09/01/20 00:00	09/10/20 10:00	
550-148816-3	C0827N	Air	08/27/20 00:00	09/10/20 10:00	
550-148816-4	C0828E	Air	08/28/20 00:00	09/10/20 10:00	
550-148816-5	C083120W	Air	08/31/20 00:00	09/10/20 10:00	
550-148816-6	C082920X	Air	08/29/20 00:00	09/10/20 10:00	

Client Sample ID: C090220N — Lab Sample ID: 550-148816-1

Date Collected: 09/02/20 00:00
Matrix: Air
Date Received: 09/10/20 10:00
Sample Air Volume: 1242 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000201			0.250	09/16/20 19:27	1	SRA

Client Sample ID: C090120W — Lab Sample ID: 550-148816-2

Date Collected: 09/01/20 00:00
Matrix: Air
Date Received: 09/10/20 10:00
Sample Air Volume: 1150 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000217			0.250	09/16/20 19:31	1	SRA

Client Sample ID: C0827N — Lab Sample ID: 550-148816-3

Date Collected: 08/27/20 00:00
Matrix: Air
Date Received: 09/10/20 10:00
Sample Air Volume: 356 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000702			0.250	09/16/20 19:35	1	SRA

Client Sample ID: C0828E — Lab Sample ID: 550-148816-4

Date Collected: 08/28/20 00:00
Matrix: Air
Date Received: 09/10/20 10:00
Sample Air Volume: 1080 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000231			0.250	09/16/20 19:39	1	SRA

Client Sample ID: C083120W — Lab Sample ID: 550-148816-5

Date Collected: 08/31/20 00:00
Matrix: Air
Date Received: 09/10/20 10:00
Sample Air Volume: 990 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000253			0.250	09/16/20 19:43	1	SRA

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Demolition

Job ID: 550-148816-1

Client Sample ID: C082920X
Date Collected: 08/29/20 00:00
Date Received: 09/10/20 10:00
Sample Air Volume: 960 L

Lab Sample ID: 550-148816-6
Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000260			0.250	09/16/20 19:47	1	SRA

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc. Job ID: 550-148816-1
Project/Site: BNL Demolition

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Demolition

Job ID: 550-148816-1

Method	Method Description	Protocol	Laboratory
PE-MET-012	NIOSH Method 7300	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

148816

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: DAVID FORSE	Site Contact: D. FORSE	Date: 9-9-20	COC No:
FPM Remediations	Email: d.forse@fpm.remediations.com	Lab Contact: Ivan Vania	Carrier: FedEx	1 of 1 COCs
181 Kenwood Avenue	Tel/Fax:	Analysis Turnaround Time		Sampler:
Oneida, NY 13421		☐ CALENDAR DAYS ☐ WORKING DAYS		For Lab Use Only:
(314) 336-7721 ext 203 Phone		TAT if different from Below ____		Walk-in Client:
cell 3153367580		☐ 2 weeks		Lab Sampling:
Project Name: BNL Demolition		☐ 1 week		
Site:		☐ 2 days		Job / SDG No.:
P O #		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	ASBO-NIOSH 7400	Pb-NIOSH 7303	Sample Specific Notes:
C0902201N	9-2	1807	G	AIR	2			1	1	2 L/m Flow -01
C0901201W	9-1	1805	G		2			1	1	2 L/m -02
C0827N	8-27	1725	G		2			1	1	2 L/m -03
C0828E DF	8-28	1620	G		2			1	1	2 L/m -04
C0831201W	8-31	1645	G		2			1	1	2 L/m -05
C0829201X	8-29	1600	G		2			1	1	2 L/m -06

550-148816 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client X Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Amb no Ice

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.: ____
Relinquished by: Paul Forse	Company: FPM	Date/Time: 9-9 1400	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by: Fed Ex	Company:	Date/Time:	Received in Laboratory by:	Company: TA-PHX	Date/Time: 9/10/20 10:00

9/18/2020

Asbestos Analyses

J3 Resources

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Ivan Vania
Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento CA 95605

J3 Order #: JP201022963
Project #:
Date Received: 10-Sep-2020
Date Analyzed: 15-Sep-2020
Date Reported: 16-Sep-2020

BNL Demolition

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	f/cm3
201022963-001	C090220N		1242	3	100	0.002	<7.0	<0.002
201022963-002	C090120W		1150	2	100	0.002	<7.0	<0.002
201022963-003	C0827N		356	4	100	0.008	<7.0	<0.008
201022963-004	C0828E		1080	3	100	0.002	<7.0	<0.002
201022963-005	C083120W		990	1	100	0.003	<7.0	<0.003
201022963-006	C082920X		1080	2	100	0.002	<7.0	<0.002

Shervin Aghaabbasi Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 AIHA Lab ID: 157714 TDSHS License: 30-0273

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins

Environment Testing TestAmerica

22403

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: DAVID FORSE	Site Contact: D. FORSE	Date: 9-9-20	COC No:
FPM Remediations	Email: d.forse@fpm-group.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
181 Kenwood Avenue	Tel/Fax: @FPM-Remediations.	Analysis Turnaround Time		Sampler:
Oneida, NY 13421	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(314) 336-7721 ext 203 Phone	TAT if different from Below _____			Walk-in Client:
CELL 315 336 7586	☐ 2 weeks			Lab Sampling:
Project Name: BNL Demolition	X 1 week			Job / SDG No.:
Site:	☐ 2 days			
PO#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	ASBO-NIOSH-7400	Pb-NIOSH-7303															Sample Specific Notes:	
C0902 20 N	9-2	1807	G	AIR	2			1	1															Flow 2 L/m	621 minutes
C0901 20 W	9-1	1805	G		2			1	1															2 L/m	575 minutes
C0827N	8-27	1725	G		2			1	1															2 L/m	178 minutes
C0828E DF	8-28	1620	G		2			1	1															2 L/m	540 minutes
C0831 20 W	8-31	1645	G		2			1	1															2 L/m	495 minutes
C0829 20 X	8-29	1600	G		2			1	1	n.t.														2 L/m	540 minutes

Per D.F./ n.t.

Page 18 of 21

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client X Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

	Company	Date/Time		Company	Date/Time
Relinquished by: Dave Forse	FPM	9-9 1400	Received by: [signature]	EJ3	9/10/20 11:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Shipping and Receiving Documents

Proj #14976

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

148816

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: DAVID FORSE	Site Contact: D. FORSE	Date: 9-9-20	COC No:
FPM Remediations	Email: d.forse@fpmremediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
181 Kenwood Avenue	Tel/Fax:	Analysis Turnaround Time		Sampler:
Oneida, NY 13421		☐ CALENDAR DAYS ☐ WORKING DAYS		For Lab Use Only:
(314) 336-7721 ext 203 Phone		TAT if different from Below ____		Walk-in Client:
Cell 3153367580		☐ 2 weeks		Lab Sampling:
Project Name: BNL Demolition		☐ 1 week		
Site:		☐ 2 days		Job / SDG No.:
PO#		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	ASBO-NIOSH 7400	Pb-NIOSH 7303	Sample Specific Notes:
CQ90220N	9-2	1807	G	AIR	2			1	1	2 L/m -01
CQ90120W	9-1	1805	G		2			1	1	2 L/m -02
CQ827N	8-27	1725	G		2			1	1	2 L/m -03
CQ828E pf	8-28	1620	G		2			1	1	2 L/m -04
CQ83120W	8-31	1645	G		2			1	1	2 L/m -05
CQ82920X	8-29	1600	G		2			1	1	2 L/m -06

Flow

550-148816 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Ant no Ice

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.: ____
Relinquished by: Paul Forse	Company: FPM	Date/Time: 9-9 1400	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by: Fed Ex	Company:	Date/Time:	Received in Laboratory by:	Company: TA-PHL	Date/Time: 9/10/20 10:00

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

21403

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: DAVID FORSE	Site Contact: D. FORSE	Date: 9-9-20	COC No:
FPM Remediations	Email: d.forse@fpm-remed.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
181 Kenwood Avenue	Tel/Fax: @FPM-Remediations.	Analysis Turnaround Time		Sampler:
Oneida, NY 13421		☐ CALENDAR DAYS ☐ WORKING DAYS		For Lab Use Only:
(314) 336-7721 ext 203 Phone		TAT if different from Below _____		Walk-in Client:
CELL 315 336 7586		☐ 2 weeks		Lab Sampling:
Project Name: BNL Demolition		X 1 week		
Site:		☐ 2 days		Job / SDG No.:
PO#		☐ 1 day		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	ASBO-NIOSH-7400	Pb-NIOSH-7303																Sample Specific Notes:
C0902 20 N	9-2	1807	G	AIR	2			1	1																Flow 2 L/m
C0901 20 W	9-1	1805	G		2			1	1																2 L/m
C0827N	8-27	1725	G		2			1	1																2 L/m
C0828 E DF	8-28	1620	G		2			1	1																2 L/m
C0831 20 W	8-31	1645	G		2			1	1																2 L/m
C0829 20 X	8-29	1600	G		2			1	1	n.t.															2 L/m

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4= HNO_3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client X Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dave Forse	FPM	9-9 1400	Mm Majle	EJ3	9/10/20 11:20
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 160-39710-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
10/16/2020 6:06 PM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
10/16/2020
Revision: 1

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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- Sample Summary 5

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- Client Chain of Custody 24

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-39710-1 - Revision 1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. This revision adds notes for two additional Pb samples submitted for analysis.

RECEIPT

The samples were direct shipped to ETA Phoenix and arrived on 9/22/2020 at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 9/23/2020 at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39710-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39710-1	C090820N	Air	09/08/20 07:16	10/02/20 14:53	
160-39710-2	C090820W	Air	09/08/20 07:40	10/02/20 14:53	
160-39710-3	C090920W	Air	09/09/20 07:40	10/02/20 14:53	
160-39710-4	C091120S	Air	09/11/20 07:55	10/02/20 14:53	
160-39710-5	C091220W	Air	09/12/20 08:18	10/02/20 14:53	
160-39710-6	C091320X	Air	09/13/20 07:00	10/02/20 14:53	
160-39710-7	C091420S	Air	09/14/20 07:50	09/22/20 09:50	
160-39710-8	C091420E	Air	09/14/20 07:10	09/22/20 09:50	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-149572-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
9/30/2020 7:03:12 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Job ID: 550-149572-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-149572-1

Comments
No additional comments.

Receipt
The samples were received on 9/22/2020 9:50 AM; the samples arrived in good condition.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-220724 and analytical batch 550-221242.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149572-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-149572-1	C090820N	Air	09/08/20 00:00	09/22/20 09:50	
550-149572-2	C090820W	Air	09/08/20 00:00	09/22/20 09:50	
550-149572-3	C090920W	Air	09/09/20 00:00	09/22/20 09:50	
550-149572-4	C091120S	Air	09/11/20 00:00	09/22/20 09:50	
550-149572-5	C091220W	Air	09/12/20 00:00	09/22/20 09:50	
550-149572-6	C091420S	Air	09/14/20 00:00	09/22/20 09:50	
550-149572-7	C091420E	Air	09/14/20 00:00	09/22/20 09:50	
550-149572-8	C091320X	Air	09/13/20 00:00	09/22/20 09:50	

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149572-1
SDG: 1085-20-01

Client Sample ID: C090820N — Lab Sample ID: 550-149572-1

Date Collected: 09/08/20 00:00
Date Received: 09/22/20 09:50
Sample Air Volume: 1228 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.105	0.0000858			0.0125	09/28/20 15:06	1	ARE

Client Sample ID: C090820W — Lab Sample ID: 550-149572-2

Date Collected: 09/08/20 00:00
Date Received: 09/22/20 09:50
Sample Air Volume: 1216 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.102	0.0000835			0.0125	09/28/20 15:08	1	ARE

Client Sample ID: C090920W — Lab Sample ID: 550-149572-3

Date Collected: 09/09/20 00:00
Date Received: 09/22/20 09:50
Sample Air Volume: 1190 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0812	0.0000682			0.0125	09/28/20 15:10	1	ARE

Client Sample ID: C091120S — Lab Sample ID: 550-149572-4

Date Collected: 09/11/20 00:00
Date Received: 09/22/20 09:50
Sample Air Volume: 1256 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0654	0.0000520			0.0125	09/28/20 15:11	1	ARE

Client Sample ID: C091220W — Lab Sample ID: 550-149572-5

Date Collected: 09/12/20 00:00
Date Received: 09/22/20 09:50
Sample Air Volume: 1164 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0756	0.0000649			0.0125	09/28/20 15:13	1	ARE

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149572-1
SDG: 1085-20-01

Client Sample ID: C091420S

Lab Sample ID: 550-149572-6

Date Collected: 09/14/20 00:00
Matrix: Air
Date Received: 09/22/20 09:50
Sample Air Volume: 1168 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.109	0.0000935			0.0125	09/28/20 15:15	1	ARE

Client Sample ID: C091420E

Lab Sample ID: 550-149572-7

Date Collected: 09/14/20 00:00
Matrix: Air
Date Received: 09/22/20 09:50
Sample Air Volume: 1214 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0610	0.0000502			0.0125	09/28/20 15:17	1	ARE

Client Sample ID: C091320X

Lab Sample ID: 550-149572-8

Date Collected: 09/13/20 00:00
Matrix: Air
Date Received: 09/22/20 09:50
Sample Air Volume: 1230 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0586	0.0000476			0.0125	09/28/20 15:19	1	ARE

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149572-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149572-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
7300	NIOSH Method 7300 ICP-MS (Modified)	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

PB

9/30/2020

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 149572

Company: FPM REMEDIATIONS	Page 1 of 1		
Contact Name: DAVID FORSE	Sampler Name and Phone Number: DAVID FORSE 315 3367580		
E-Mail Address:	Phone: 3153367580	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@FPM-Remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C
Sample Seals Intact: Yes ____ No N/A
Sample Seals Intact: Yes ____ No 2
Total # of Samples: 8

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149572 Chain of Custody

Analysis Method(s)/Analyte(s)

NIOSH 7303 Pb

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
-01	FILTER	27775	2	C090820 N	9-8	0716	1730	614	1228				1
-02		76	2	C090820 W	9-8	0740	1748	608	1216				1
-03		75	2	C090920 W	9-9	0740	1735	595	1190				1
-04		62	2	C091120 S	9-11	0755	1823	628	1256				1
-05		75	2	C091220 W	9-12	0818	1800	582	1164				1
-06		76	2	C091420 S	9-14	0750	1734	584	1168				1
-07		75	2	C091420 E	9-14	0710	1717	607	1214				1
-08		80	2	C091320 X	9-13	0700	1715	615	1230				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-19	1900	Dave Forse (FPM)	TA-PHX
9/22/20	9150	Fed Ex	

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-149571-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
9/28/2020 5:56:49 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-149571-1
SDG: 1085-20-01

Job ID: 550-149571-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-149571-1

Comments
No additional comments.

Receipt
The samples were received on 9/22/2020 9:50 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023238
Project #: 550-149571-1
Date Received: 23-Sep-2020
Date Analyzed: 28-Sep-2020
Date Reported: 28-Sep-2020

BNL STACK DEMO

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Fiber Counts f/cm3
201023238-001	C090820N (550-149571-1)		1228	3	100	0.002	<7.0	<0.002
201023238-002	C090820W (550-149571-2)		1216	4	100	0.002	<7.0	<0.002
201023238-003	C090920W (550-149571-3)		1190	4	100	0.002	<7.0	<0.002
201023238-004	C091120s (550-149571-4)		1256	3	100	0.002	<7.0	<0.002
201023238-005	C091220W (550-149571-5)		1164	2	100	0.002	<7.0	<0.002
201023238-006	C091320X (550-149571-6)		1230	2	100	0.002	<7.0	<0.002

Samantha Harrison Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

23238

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28712.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-149571-1
Address: 3113 Red Bluff Road,	Due Date Requested: 9/28/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C090820N (550-149571-1)	9/8/20	Eastern		Air			X		1	sample volume = 1228L
C090820W (550-149571-2)	9/8/20	Eastern		Air			X		1	sample volume = 1216L
C090920W (550-149571-3)	9/9/20	Eastern		Air			X		1	sample volume = 1190L
C091120S (550-149571-4)	9/11/20	Eastern		Air			X		1	sample volume = 1256L
C091220W (550-149571-5)	9/12/20	Eastern		Air			X		1	sample volume = 1164L
C091320X (550-149571-6)	9/13/20	Eastern		Air			X		1	sample volume = 1230L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: 09-22-20 16:25		TA-Phx	Received by: Fedex		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 9/23/2020 1:33 PM	Company EJ3
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ASB

9/28/2020

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 149571

Company: FPM REMEDIATIONS		Page 1 of 1	
Contact Name: DAVID FORSE		Sampler Name and Phone Number: DAVID FORSE 315 336 7580	
E-Mail Address:	Phone: 315 3367580	Project Name: BNL STACK DEMO	
Address: 181 KENWOOD AVE		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: FPM Rem.	Phone: 315 3367721	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 6

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149571 Chain of Custody

Analysis Method(s)/Analyte(s)

NIOSH 7400 AS

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	NIOSH 7400 AS
-01	TUBE	75	2	C09082QN	9-8	0716	1730	614	1228				1
-02		73	2	C09082QW	9-8	0740	1748	608	1216				1
-03		63	2	C09092QW	9-9	0740	1735	595	1190				1
-04		71	2	C09112QS	9-11	0755	1823	628	1256				1
-05		71	2	C09122QW	9-12	0818	1800	582	1164				1
-06		81	2	C09132QX	9-13	0700	1715	615	1230				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-19	19:00	David Forse (FPM)	
9/22/20	9:50	Fed Ex	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

Subcontract Data

Shipping and Receiving Documents

ASB

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 149571

Company: FPM REMEDIATIONS		Page 1 of 1	
Contact Name: DAVID FORSE		Sampler Name and Phone Number: DAVID FORSE 315 336 7580	
E-Mail Address:	Phone: 315 3367580	Project Name: BNL STACK DEMO	
Address: 181 KENWOOD AVE		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: FPM Rem.	Phone: 315 3367721	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 6

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149571 Chain of Custody

Analysis Method(s)/Analyte(s)

NIOSH 7400 ASB

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	NIOSH 7400 ASB
-01	TUBE	75	2	C0908200N	9-8	0716	1730	614	1228				1
-02	"	73	2	C0908200W	9-8	0740	1748	608	1216				1
-03	"	63	2	C0909200W	9-9	0740	1735	595	1190				1
-04	"	71	2	C0911200S	9-11	0755	1823	628	1256				1
-05	"	71	2	C0912200W	9-12	0818	1800	582	1164				1
-06	"	81	2	C0913200X	9-13	0700	1715	615	1230				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-19	19:00	David Forse (FPM)	TA-PHX
9/22/20	9:50	Fed Ex	

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

PB

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 149572

Company: FPM REMEDIATIONS		Page 1 of 1	
Contact Name: DAVID FORSE		Sampler Name and Phone Number: DAVID FORSE 315 336 7580	
E-Mail Address:	Phone: 315 336 7580	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@FPM-Remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C
Sample Seals Intact: Yes ____ No N/A
Sample Seals Intact: Yes ____ No N/A
Total # of Samples: 8

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149572 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb						
-01	FILTER	27775	2	C09082ON	9-8	0716	1730	614	1228				1						
-02		76	2	C09082OW	9-8	0740	1748	608	1216				1						
-03		75	2	C09092OW	9-9	0740	1735	595	1190				1						
-04		62	2	C09112OS	9-11	0755	1823	628	1256				1						
-05		75	2	C09122OW	9-12	0818	1800	582	1164				1						
-06		76	2	C09142OS	9-14	0750	1734	584	1168				1						
-07		75	2	C09142OE	9-14	0710	1717	607	1214				1						
-08		80	2	C09132OX	9-13	0700	1715	615	1230				1						

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-19	1900	Dale Forse (FPM)	TA-PHX
9/22/20	9150	FedEx	

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

ANALYTICAL REPORT

Job Number: 160-39948-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
10/19/2020 6:38 PM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
10/19/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-39948-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The samples were direct shipped to ETA Phoenix and arrived on 9/26/2020 at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 9/29/2020 at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39948-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39948-1	C091520S	Air	09/15/20 17:35	09/26/20 09:25	
160-39948-2	C091520W	Air	09/15/20 17:40	09/26/20 09:25	
160-39948-3	C091620N	Air	09/16/20 17:25	09/26/20 09:25	
160-39948-4	C091720N	Air	09/17/20 17:40	09/26/20 09:25	
160-39948-5	C091720E	Air	09/17/20 17:36	09/26/20 09:25	
160-39948-6	C091820S	Air	09/18/20 18:00	09/26/20 09:25	
160-39948-7	C091920S	Air	09/19/20 17:21	09/26/20 09:25	
160-39948-8	C092120S	Air	09/21/20 17:45	09/26/20 09:25	
160-39948-9	C092120W	Air	09/21/20 17:50	09/26/20 09:25	
160-39948-10	C092120X	Air	09/21/20 17:50	09/26/20 09:25	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-149812-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL Stack Demo

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
10/15/2020 5:05:37 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Job ID: 550-149812-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-149812-1

Comments
No additional comments.

Receipt
The samples were received on 9/26/2020 9:25 AM; the samples arrived in good condition.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-221493 and analytical batch 550-222541.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-149812-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-149812-1	C091520S	Air	09/15/20 00:00	09/26/20 09:25	
550-149812-2	C091520W	Air	09/15/20 00:00	09/26/20 09:25	
550-149812-3	C091620N	Air	09/16/20 00:00	09/26/20 09:25	
550-149812-4	C091720N	Air	09/17/20 00:00	09/26/20 09:25	
550-149812-5	C091720E	Air	09/17/20 00:00	09/26/20 09:25	
550-149812-6	C091820S	Air	09/18/20 00:00	09/26/20 09:25	
550-149812-7	C091920S	Air	09/19/20 00:00	09/26/20 09:25	
550-149812-8	C092120S	Air	09/21/20 00:00	09/26/20 09:25	
550-149812-9	C092120W	Air	09/21/20 00:00	09/26/20 09:25	
550-149812-10	C092120X	Air	09/21/20 00:00	09/26/20 09:25	

Client Sample ID: C091520S — Lab Sample ID: 550-149812-1

Date Collected: 09/15/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1190 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0284	0.0000238			0.0125	10/12/20 14:44	1	ARE

Client Sample ID: C091520W — Lab Sample ID: 550-149812-2

Date Collected: 09/15/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1184 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0180	0.0000152			0.0125	10/12/20 14:46	1	ARE

Client Sample ID: C091620N — Lab Sample ID: 550-149812-3

Date Collected: 09/16/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1244 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000100			0.0125	10/12/20 14:47	1	ARE

Client Sample ID: C091720N — Lab Sample ID: 550-149812-4

Date Collected: 09/17/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1190 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0168	0.0000141			0.0125	10/12/20 14:49	1	ARE

Client Sample ID: C091720E — Lab Sample ID: 550-149812-5

Date Collected: 09/17/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1212 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0250	0.0000206			0.0125	10/12/20 14:51	1	ARE

Client Sample ID: C091820S — Lab Sample ID: 550-149812-6

Date Collected: 09/18/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1184 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0165	0.0000139			0.0125	10/12/20 14:53	1	ARE

Client Sample ID: C091920S — Lab Sample ID: 550-149812-7

Date Collected: 09/19/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1112 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0134	0.0000121			0.0125	10/12/20 14:55	1	ARE

Client Sample ID: C092120S — Lab Sample ID: 550-149812-8

Date Collected: 09/21/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1120 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0188	0.0000168			0.0125	10/12/20 15:00	1	ARE

Client Sample ID: C092120W — Lab Sample ID: 550-149812-9

Date Collected: 09/21/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1100 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000114			0.0125	10/12/20 15:02	1	ARE

Client Sample ID: C092120X — Lab Sample ID: 550-149812-10

Date Collected: 09/21/20 00:00 — **Matrix: Air**
Date Received: 09/26/20 09:25
Sample Air Volume: 1100 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000114			0.0125	10/12/20 15:04	1	ARE

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-149812-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-149812-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
7300	NIOSH Method 7300 ICP-MS (Modified)	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

149812

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 3153367580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: AMB °C FE
Sample Seals Intact: Yes ____ No ____
Sample Seals Intact: Yes ____ No ____ SAT
Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149812 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
-01		76	2	C09152OS	9-15	0740	1735	595	1190				1
-02		62	2	C09152OW	9-15	0748	1740	592	1184				1
-03		62	2	C09162ON	9-16	0703	1725	622	1244				1
					~~9-16~~	~~0703~~	~~1725~~						1
-04		70	2	C09172ON	9-17	0745	1740	595	1190				1
-05		71	2	C09172OE	9-17	0730	1736	606	1212				1
-06		70	2	C09182OS	9-18	0808	1800	592	1184				1
-07		70	2	C09192OS	9-19	0805	1721	556	1112				1
-08		70	2	C09212OS	9-21	0825	1745	560	1120				1
-09		76	2	C09212OW	9-21	0840	1750	550	1100				1
-10		80	2	C09212OX	9-21	0840	1750	550	1100				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-25	1400	Dave Forse	
9-26-20	0925		TAPPX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

10/15/2020

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Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-149813-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL Stack Demo

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
10/6/2020 2:57:38 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-149813-1
SDG: 1085-20-01

Job ID: 550-149813-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-149813-1

Comments
No additional comments.

Receipt
The samples were received on 9/26/2020 9:25 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023323
Project #: 550-149813-1
Date Received: 29-Sep-2020
Date Analyzed: 05-Oct-2020
Date Reported: 05-Oct-2020

BNL Stack Demo (9/15)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Fiber Counts f/cm3
201023323-001	C091520S (550-149813-1)		1190	1	100	0.002	<7.0	<0.002
201023323-002	C091520W (550-149813-2)		1184	1	100	0.002	<7.0	<0.002
201023323-003	C091620N (550-149813-3)		1244	1	100	0.002	<7.0	<0.002
201023323-004	C091720N (550-149813-4)		1190	1	100	0.002	<7.0	<0.002
201023323-005	C091720E (550-149813-5)		1212	1	100	0.002	<7.0	<0.002
201023323-006	C091820S (550-149813-6)		1184	1	100	0.002	<7.0	<0.002
201023323-007	C091920S (550-149813-7)		1112	1	100	0.002	<7.0	<0.002
201023323-008	C092120S (550-149813-8)		1120	2	100	0.002	<7.0	<0.002
201023323-009	C092120W (550-149813-9)		1100	1	100	0.002	<7.0	<0.002
201023323-010	C092120X (550-149813-10)		1100	1	100	0.002	<7.0	<0.002

Kennetch Castro Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

23323

Chain of Custody Record

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10/6/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28761.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 1 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-149813-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 10/2/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Stack Demo	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C091520S (550-149813-1)	9/15/20	Eastern		Air			X		1	1190 L
C091520W (550-149813-2)	9/15/20	Eastern		Air			X		1	1184 L
C091620N (550-149813-3)	9/16/20	Eastern		Air			X		1	1244 L
C091720N (550-149813-4)	9/17/20	Eastern		Air			X		1	1190 L
C091720E (550-149813-5)	9/17/20	Eastern		Air			X		1	1212 L
C091820S (550-149813-6)	9/18/20	Eastern		Air			X		1	1184 L
C091920S (550-149813-7)	9/19/20	Eastern		Air			X		1	1112 L
C092120S (550-149813-8)	9/21/20	Eastern		Air			X		1	1120 L
C092120W (550-149813-9)	9/21/20	Eastern		Air			X		1	1100 L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Erica 09-28-20	14:40	TR-Plex	Fedex		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			M Mongue	9/29 10:30	EJ3
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

eurofins | Environment Testing America

10/6/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28761.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 2 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-149813-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 10/2/2020	Analysis Requested		Preservation Codes:
City: Pasadena	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EOA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 77503				
Phone:	PO #:			Other:
Email:	WO #:			
Project Name: BNL Stack Demo	Project #: 55014976			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C092120X (550-149813-10)	9/21/20	Eastern		Air			X		1	1100 L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[illegible] 9-28-20	14:40	TA-Phx	Fedex		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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10/6/2020

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM Remediations		Page 1 of 1	
Contact Name: ~~BNL STACK DEMO~~		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address: MIKE GRIFASI	Phone: 3153367721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: Y N	Standard Level II:
E-Mail Address: M.Grifasi@fpmremediations.com		E-Mail Results: Y N	Level III:
Send Invoice To:	Phone:	EDD: Y N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: AMY 3 °C FT

Sample Seals Intact: Yes ____ No ____

Sample Seals Intact: Yes ____ No ____ SAT

Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days

____ 1 Business Day ____ 4 Business Days

____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability (Surcharges apply)

550-149813 Chain of Custody

Analysis Method(s)/Analyte(s)

Asbestos NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos NIOSH 7400
-01		69	2	C0915ZOS	9-15	0740	1735	595	1190				1
-02		73	2	C0915ZOW	9-15	0748	1740	592	1184				1
-03		63	2	C0916ZON	9-16	0703	1725	622	1244				1
-04		73	2	C0917ZON	9-17	0745	1740	595	1190				1
-05		71	2	C0917ZOE	9-17	0730	1736	606	1212				1
-06		69	2	C0918ZOS	9-18	0808	1800	592	1184				1
-07		69	2	C0919ZOS	9-19	0805	1721	556	1112				1
-08		69	2	C0921ZOS	9-21	0825	1745	560	1120				1
-09		73	2	C0921ZOW	9-21	0840	1750	550	1100				1
-10		81	2	C0921ZOX	9-21	0840	1750	550	1100				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-25	1400	Dave Forse	
9-26-20	0925		TAPHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

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Shipping and Receiving Documents

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149812

Lab Number:

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 3153367580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: AMB °C FE
Sample Seals Intact: Yes ____ No ____
Sample Seals Intact: Yes ____ No ____ SAT
Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-149812 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
-01		76	2	C09152OS	9-15	0740	1735	595	1190				1
-02		62	2	C09152OW	9-15	0748	1740	592	1184				1
-03		62	2	C09162ON	9-16	0703	1725	622	1244				1
					~~9-16~~	~~0703~~	~~1725~~						1
-04		70	2	C09172ON	9-17	0745	1740	595	1190				1
-05		71	2	C09172OE	9-17	0730	1736	606	1212				1
-06		70	2	C09182OS	9-18	0808	1800	592	1184				1
-07		70	2	C09192OS	9-19	0805	1721	556	1112				1
-08		70	2	C09212OS	9-21	0825	1745	560	1120				1
-09		70	2	C09212OW	9-21	0840	1750	550	1100				1
-10		80	2	C09212OX	9-21	0840	1750	550	1100				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-25	1400	Dave Forse	
9-26-20	0925		TAPPX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

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149813 A

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM Remediations		Page 1 of 1	
Contact Name: ~~BNL STACK DEMO~~		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address: MIKE GRIFASI	Phone: 3153367721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@fpmremediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: AMB °C FE
Sample Seals Intact: Yes ____ No ____
Sample Seals Intact: Yes ____ No ____ SAT
Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability (Surcharges apply)

550-149813 Chain of Custody

Analysis Method(s)/Analyte(s)

Asbestos NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos NIOSH 7400
-01		69	2	C09152OS	9-15	0740	1735	595	1190				1
-02		73	2	C09152OW	9-15	0748	1740	592	1184				1
-03		63	2	C09162ON	9-16	0703	1725	622	1244				1
-04		73	2	C09172ON	9-17	0745	1740	595	1190				1
-05		71	2	C09172OE	9-17	0730	1736	606	1212				1
-06		69	2	C09182OS	9-18	0808	1800	592	1184				1
-07		69	2	C09192OS	9-19	0805	1721	556	1112				1
-08		69	2	C09212OS	9-21	0825	1745	560	1120				1
-09		73	2	C09212OW	9-21	0840	1750	550	1100				1
TO		81	2	C09212OX	9-21	0840	1750	550	1100				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
9-25	1400	Dave Forse	
9-26-20	0925		TAPHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

ANALYTICAL REPORT

Job Number: 160-39953-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
10/19/2020 6:40 PM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
10/19/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

Table of Contents

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Subcontracted Data 6

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-39953-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The samples were direct shipped to ETA Phoenix and arrived on 10/08/2020 at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 10/09/2020 at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39953-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39953-1	C092220S	Air	09/22/20 17:40	10/07/20 09:40	
160-39953-2	C092220E	Air	09/22/20 17:30	10/07/20 09:40	
160-39953-3	C092320E	Air	09/23/20 17:10	10/07/20 09:40	
160-39953-4	C092420N	Air	09/24/20 17:36	10/07/20 09:40	
160-39953-5	C092420E	Air	09/24/20 17:31	10/07/20 09:40	
160-39953-6	C092520E	Air	09/25/20 17:10	10/07/20 09:40	
160-39953-7	C092520N	Air	09/25/20 17:16	10/07/20 09:40	
160-39953-8	C092620E	Air	09/26/20 17:23	10/07/20 09:40	
160-39953-9	C092620N	Air	09/26/20 17:29	10/07/20 09:40	
160-39953-10	C090926X	Air	09/26/20 17:20	10/07/20 09:40	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-150490-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
10/15/2020 9:49:33 AM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150490-1
SDG: 1085-20-01

Job ID: 550-150490-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-150490-1

Comments
No additional comments.

Receipt
The samples were received on 10/7/2020 9:40 AM; the samples arrived in good condition.

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

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150490-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-150490-1	C092220S	Air	09/22/20 00:00	10/07/20 09:40	
550-150490-2	C092220E	Air	09/22/20 00:00	10/07/20 09:40	
550-150490-3	C092320E	Air	09/23/20 00:00	10/07/20 09:40	
550-150490-4	C092420N	Air	09/24/20 00:00	10/07/20 09:40	
550-150490-5	C092420E	Air	09/24/20 00:00	10/07/20 09:40	
550-150490-6	C092520E	Air	09/25/20 00:00	10/07/20 09:40	
550-150490-7	C092520N	Air	09/25/20 00:00	10/07/20 09:40	
550-150490-8	C092620E	Air	09/26/20 00:00	10/07/20 09:40	
550-150490-9	C092620N	Air	09/26/20 00:00	10/07/20 09:40	
550-150490-10	C092620X	Air	09/26/20 00:00	10/07/20 09:40	

Client Sample ID: C092220S — Lab Sample ID: 550-150490-1

Date Collected: 09/22/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1180 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000106			0.0125	10/09/20 07:51	1	ARE

Client Sample ID: C092220E — Lab Sample ID: 550-150490-2

Date Collected: 09/22/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1200 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000104			0.0125	10/09/20 07:53	1	ARE

Client Sample ID: C092320E — Lab Sample ID: 550-150490-3

Date Collected: 09/23/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1120 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000112			0.0125	10/09/20 07:55	1	ARE

Client Sample ID: C092420N — Lab Sample ID: 550-150490-4

Date Collected: 09/24/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1152 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**0.0131**	**0.0000114**			0.0125	10/09/20 07:57	1	ARE

Client Sample ID: C092420E — Lab Sample ID: 550-150490-5

Date Collected: 09/24/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1162 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**0.0408**	**0.0000351**			0.0125	10/09/20 07:58	1	ARE

Client Sample ID: C092520E — Lab Sample ID: 550-150490-6

Date Collected: 09/25/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1140 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000110			0.0125	10/09/20 08:00	1	ARE

Client Sample ID: C092520N — Lab Sample ID: 550-150490-7

Date Collected: 09/25/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1132 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**0.0176**	**0.0000155**			0.0125	10/09/20 08:02	1	ARE

Client Sample ID: C092620E — Lab Sample ID: 550-150490-8

Date Collected: 09/26/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1142 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000109			0.0125	10/09/20 08:07	1	ARE

Client Sample ID: C092620N — Lab Sample ID: 550-150490-9

Date Collected: 09/26/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1138 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000110			0.0125	10/09/20 08:09	1	ARE

Client Sample ID: C092620X — Lab Sample ID: 550-150490-10

Date Collected: 09/26/20 00:00 — **Matrix: Air**
Date Received: 10/07/20 09:40
Sample Air Volume: 1120 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000112			0.0125	10/09/20 08:11	1	ARE

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150490-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150490-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
7300	NIOSH Method 7300 ICP-MS (Modified)	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Pb

10/15/2020

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 150490

Company: FPM Remediations	Page 1 of 1		
Contact Name: Mike Grifasi	Sampler Name and Phone Number: DAVE FORSE 315 336 7580		
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: M.grifasi@fpm-remediations.com	Project Number: 1085-20-01		
City, State, Zip: ONEIDA NY 13421	P.O. Number:	Data Package:	
Send Report To: 181 Kenwood	Phone: (315)3367721	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C
Sample Seals Intact: Yes ____ No ____
Sample Seals Intact: Yes ____ No ____
Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days ____ 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150490 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)
-01	FILTER	70	2	C0922205	9-22	0750	1740	590	1180			
-02		72	2	C0922205E	9-22	0730	1730	600	1200			
-03		72	2	C0923205E	9-23	0750	1710	560	1120			
-04		75	2	C0924205N	9-24	0800	1736	576	1152			
-05		72	2	C0924205E	9-24	0750	1731	581	1162			
-06		72	2	C0925205E	9-25	0740	1710	570	1140			
-07		75	2	C0925205N	9-25	0750	1716	566	1132			
-08		72	2	C0926205E	9-26	0752	1723	571	1142			
-09		75	2	C0926205N	9-26	0800	1729	569	1138			
-10		81	2	C0926205X	9-26	0800	1720	560	1120			

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10/5	1730	David Forse	
10-7-20	0900		

All services are performed subject to the Terms & Conditions on the reverse side.

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Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-150513-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
10/19/2020 3:51:39 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150513-1
SDG: 1085-20-01

Job ID: 550-150513-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-150513-1

Comments
No additional comments.

Receipt
The samples were received on 10/7/2020 9:40 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023539
Project #: 550-150513-1
Date Received: 09-Oct-2020
Date Analyzed: 15-Oct-2020
Date Reported: 15-Oct-2020

BNL STACK DEMO (9/22)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Counts f/cm3
201023539-001	C092220S (550-150513-1)		1180	4	100	0.002	<7.0	<0.002
201023539-002	C092220E (550-150513-2)		1200	3	100	0.002	<7.0	<0.002
201023539-003	C092320E (550-150513-3)		1120	4	100	0.002	<7.0	<0.002
201023539-004	C092420N (550-150513-4)		1152	5	100	0.002	<7.0	<0.002
201023539-005	C092420E (550-150513-5)		1162	2	100	0.002	<7.0	<0.002
201023539-006	C092520E (550-150513-6)		1140	3	100	0.002	<7.0	<0.002
201023539-007	C092520N (550-150513-7)		1132	4	100	0.002	<7.0	<0.002
201023539-008	C092620E (550-150513-8)		1142	4	100	0.002	<7.0	<0.002
201023539-009	C092620N (550-150513-9)		1138	3	100	0.002	<7.0	<0.002
201023539-010	C092620X (550-150513-10)		1120	4	100	0.002	<7.0	<0.002

Joseph Martinez Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

23539

Chain of Custody Record

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10/19/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28875.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 1 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-150513-1
Address: 3113 Red Bluff Road,	Due Date Requested: 10/13/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))/ Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C092220S (550-150513-1)	9/22/20	Central		Air			X	1	1180
C092220E (550-150513-2)	9/22/20	Central		Air			X	1	1200
C092320E (550-150513-3)	9/23/20	Central		Air			X	1	1120
C092420N (550-150513-4)	9/24/20	Central		Air			X	1	1152
C092420E (550-150513-5)	9/24/20	Central		Air			X	1	1162
C092520E (550-150513-6)	9/25/20	Central		Air			X	1	1140
C092520N (550-150513-7)	9/25/20	Central		Air			X	1	1132
C092620E (550-150513-8)	9/26/20	Central		Air			X	1	1142
C092620N (550-150513-9)	9/26/20	Central		Air			X	1	1138

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/9/2020 10:15am	Company J3
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

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10/19/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28875.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 2 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-150513-1
Address: 3113 Red Bluff Road,	Due Date Requested: 10/13/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C092620X (550-150513-10)	9/26/20	Central		Air			X		1	1120 Per M.V./n.t.

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
10-08-20	1630	FedEx	FedEx		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Asbestos

10/19/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 150513

Company: FPM Remediations		Page 1 of 1	
Contact Name: Mike Grifasi		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: M.grifasi@fpm-remediations.com		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: 181 Kenwood	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature AMB °C FCP

Sample Seals Intact: Yes No

Sample Seals Intact: Yes No

Total # of Samples:

Turn Around Request

___ Same Day ___ 3 Business Days

___ 1 Business Day ___ 4 Business Days

___ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150513 Chain of Custody

Analysis Method(s)/Analyte(s)

ASBESTOS NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)
1	Tube	69	2	C0922Z0S	9-22	0750	1740	590	1180			
2		79	2	C0922Z0E	9-22	0730	1730	600	1200			
3		79	2	C0923Z0E	9-23	0750	1710	560	1120			
4		63	2	C0924Z0N	9-24	0800	1736	576	1152			
5		79	2	C0924Z0E	9-24	0750	1731	581	1162			
6		79	2	C0925Z0E	9-25	0740	1710	570	1140			
7		63	2	C0925Z0N	9-25	0750	1716	566	1132			
8		79	2	C0926Z0E	9-26	0752	1723	571	1142			
9		63	2	C0926Z0N	9-26	0800	1729	569	1138			
10		80	2	C0926Z0X	9-26	0800	1720	560	1120			

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-5	1730	Dave Forse	
10.7.20	0940		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Shipping and Receiving Documents

Pb

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 150490

Company: FPM Remediations	Page 1 of 1		
Contact Name: Mike Grifasi	Sampler Name and Phone Number: DAVE FORSE 315 336 7580		
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: M.grifasi@fpm-remediations.com		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: 181 Kenward	Phone: (315)3367721	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature AM13 °C FRP

Sample Seals Intact: Yes ____ No ____

Sample Seals Intact: Yes ____ No ____

Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days

____ 1 Business Day ____ 4 Business Days

____ 2 Business Days ____ 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150490 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)
-01	FILTER	70	2	C0922205	9-22	0750	1740	590	1180			
-02		72	2	C0922205E	9-22	0730	1730	600	1200			
-03		72	2	C0923205E	9-23	0750	1710	560	1120			
-04		75	2	C0924205N	9-24	0800	1736	576	1152			
-05		72	2	C0924205E	9-24	0750	1731	581	1162			
-06		77	2	C0925205E	9-25	0740	1710	570	1140			
-07		75	2	C0925205N	9-25	0750	1716	566	1132			
-08		72	2	C0926205E	9-26	0752	1723	571	1142			
-09		75	2	C0926205N	9-26	0800	1729	569	1138			
-10		81	2	C0926205X	9-26	0800	1720	560	1120			

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10/5	1730	David Forse	
10-7-22	0900		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8220 (0414)

Asbestos

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 150513

Company: FPM Remediations		Page 1 of 1	
Contact Name: Mike Grifasi		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: M.grifasi@fpm-remediations.com		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: 181 Kenwood	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature Amb °C FCP

Sample Seals Intact: Yes No

Sample Seals Intact: Yes No

Total # of Samples:

Turn Around Request

___ Same Day ___ 3 Business Days

___ 1 Business Day ___ 4 Business Days

___ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150513 Chain of Custody

Analysis Method(s)/Analyte(s)

ASBESTOS NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)
1	Tube	69	2	C092220S	9-22	0750	1740	590	1180			
2	"	79	2	C092220E	9-22	0730	1730	600	1200			
3	"	79	2	C092320E	9-23	0750	1710	560	1120			
4	"	63	2	C092420N	9-24	0800	1736	576	1152			
5	"	79	2	C092420E	9-24	0750	1731	581	1162			
6	"	79	2	C092520E	9-25	0740	1710	570	1140			
7	"	63	2	C092520N	9-25	0750	1716	566	1132			
8	"	79	2	C092620E	9-26	0752	1723	571	1142			
9	"	63	2	C092620N	9-26	0800	1729	569	1138			
10	"	80	2	C092620X	9-26	0800	1720	560	1120			

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-5	1730	Dave Forse	
10-7-20	0940		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

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ANALYTICAL REPORT

Job Number: 160-39955-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
10/19/2020 6:45 PM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
10/19/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-39955-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The samples were direct shipped to ETA Phoenix and arrived on 10/10/2020 at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 10/13/2020 at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39955-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39955-1	C092820N	Air	09/28/20 17:13	10/10/20 09:50	
160-39955-2	C092920N	Air	09/29/20 18:20	10/10/20 09:50	
160-39955-3	C093020E	Air	09/30/20 12:40	10/10/20 09:50	
160-39955-4	C100120E	Air	10/01/20 17:38	10/10/20 09:50	
160-39955-5	C100120N	Air	10/01/20 17:42	10/10/20 09:50	
160-39955-6	C100220E	Air	10/02/20 17:41	10/10/20 09:50	
160-39955-7	C100220S	Air	10/02/20 17:50	10/10/20 09:50	
160-39955-8	C100320E	Air	10/03/20 17:01	10/10/20 09:50	
160-39955-9	C100320N	Air	10/03/20 17:05	10/10/20 09:50	
160-39955-10	C100320X	Air	10/03/20 17:10	10/10/20 09:50	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-150774-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
10/19/2020 3:34:16 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Job ID: 550-150774-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-150774-1

Comments
No additional comments.

Receipt
The samples were received on 10/10/2020 9:50 AM; the samples arrived in good condition.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-222408 and analytical batch 550-222548.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK

Job ID: 550-150774-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-150774-1	C092820N	Air	09/28/20 00:00	10/10/20 09:50	
550-150774-2	C092920N	Air	09/29/20 00:00	10/10/20 09:50	
550-150774-3	C093020E	Air	09/30/20 00:00	10/10/20 09:50	
550-150774-4	C100120E	Air	10/01/20 00:00	10/10/20 09:50	
550-150774-5	C100120N	Air	10/01/20 00:00	10/10/20 09:50	
550-150774-6	C100220E	Air	10/02/20 00:00	10/10/20 09:50	
550-150774-7	C100220S	Air	10/02/20 00:00	10/10/20 09:50	
550-150774-8	C100320E	Air	10/03/20 00:00	10/10/20 09:50	
550-150774-9	C100320N	Air	10/03/20 00:00	10/10/20 09:50	
550-150774-10	C100320X	Air	10/03/20 00:00	10/10/20 09:50	

Client Sample ID: C092820N — Lab Sample ID: 550-150774-1

Date Collected: 09/28/20 00:00 — **Matrix: Air**
Date Received: 10/10/20 09:50
Sample Air Volume: 1166 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0251	0.0000215			0.0125	10/12/20 19:56	1	ARE

Client Sample ID: C092920N — Lab Sample ID: 550-150774-2

Date Collected: 09/29/20 00:00 — **Matrix: Air**
Date Received: 10/10/20 09:50
Sample Air Volume: 1300 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	0.0140	0.0000107			0.0125	10/12/20 19:58	1	ARE

Client Sample ID: C093020E — Lab Sample ID: 550-150774-3

Date Collected: 09/30/20 00:00 — **Matrix: Air**
Date Received: 10/10/20 09:50
Sample Air Volume: 550 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000227			0.0125	10/12/20 19:59	1	ARE

Client Sample ID: C100120E — Lab Sample ID: 550-150774-4

Date Collected: 10/01/20 00:00 — **Matrix: Air**
Date Received: 10/10/20 09:50
Sample Air Volume: 1224 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000102			0.0125	10/12/20 20:01	1	ARE

Client Sample ID: C100120N — Lab Sample ID: 550-150774-5

Date Collected: 10/01/20 00:00 — **Matrix: Air**
Date Received: 10/10/20 09:50
Sample Air Volume: 1216 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000103			0.0125	10/12/20 20:03	1	ARE

Client Sample ID: C100220E

Lab Sample ID: 550-150774-6

Date Collected: 10/02/20 00:00
Matrix: Air
Date Received: 10/10/20 09:50
Sample Air Volume: 1252 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.00000998			0.0125	10/12/20 20:05	1	ARE

Client Sample ID: C100220S

Lab Sample ID: 550-150774-7

Date Collected: 10/02/20 00:00
Matrix: Air
Date Received: 10/10/20 09:50
Sample Air Volume: 1246 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000100			0.0125	10/12/20 20:07	1	ARE

Client Sample ID: C100320E

Lab Sample ID: 550-150774-8

Date Collected: 10/03/20 00:00
Matrix: Air
Date Received: 10/10/20 09:50
Sample Air Volume: 1178 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000106			0.0125	10/12/20 20:09	1	ARE

Client Sample ID: C100320N

Lab Sample ID: 550-150774-9

Date Collected: 10/03/20 00:00
Matrix: Air
Date Received: 10/10/20 09:50
Sample Air Volume: 1150 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000109			0.0125	10/12/20 20:10	1	ARE

Client Sample ID: C100320X

Lab Sample ID: 550-150774-10

Date Collected: 10/03/20 00:00
Matrix: Air
Date Received: 10/10/20 09:50
Sample Air Volume: 1150 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: 7300 - NIOSH Method 7300 ICP-MS (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.0125	<0.0000109			0.0125	10/12/20 20:12	1	ARE

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK

Job ID: 550-150774-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK

Job ID: 550-150774-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
7300	NIOSH Method 7300 ICP-MS (Modified)	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

150774

P6

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10/19/2020

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

AMB FedEx

Temperature 4.1 °C

Sample Seals Intact: Yes ____ No ____

Sample Seals Intact: Yes ____ No ____

Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days

____ 1 Business Day ____ 4 Business Days

____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150774 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
-01	FILTER	75	2	C0928 20 N	9-28	0730	1713						1
-02		84	2	C0929 20 N	9-29	0730	1820						1
-03		72	2	C0930 20 E	9-30	0805	1240						1
-04		72	2	C1001 20 E	10-1	0726	1738						1
-05		84	2	C1001 20 N	10-1	0734	1742						1
-06		72	2	C1002 20 E	10-2	0715	1741						1
-07		70	2	C1002 20 S	10-2	0727	1750						1
-08		72	2	C1003 20 E	10-3	0712	1701						1
-09		84	2	C1003 20 N	10-3	~~0730~~ 0730	1705						1
-10		90	2	C1003 20 X	10-3	0735	1710						1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-9	1700	Dave Forse	
10-10-20	0950		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Page 15 of 85

Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-150770-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
10/19/2020 3:47:00 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-150770-1
SDG: 1085-20-01

Job ID: 550-150770-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-150770-1

Comments
No additional comments.

Receipt
The samples were received on 10/10/2020 9:50 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023609
Project #: 550-150770-1
Date Received: 13-Oct-2020
Date Analyzed: 19-Oct-2020
Date Reported: 19-Oct-2020

BNL STACK DEMO (9/28)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Fiber Counts f/cm3
201023609-001	C092820N (550-150770-1)		1166	1	100	0.002	<7.0	<0.002
201023609-002	C092920N (550-150770-2)		2600	3	100	0.001	<7.0	<0.001
201023609-003	C093020E (550-150770-3)		2750	3	100	0.001	<7.0	<0.001
201023609-004	C100120E (550-150770-4)		6120	7	100	0.000	8.9	0.001
201023609-005	C100120N(550-150770-5)		6080	10	100	0.000	12.7	0.001
201023609-006	C100220E (550-150770-6)		6260	2	100	0.000	<7.0	<0.000
201023609-007	C100220S (550-150770-7)		6230	3	100	0.000	<7.0	<0.000
201023609-008	C100320E (550-150770-8)		5890	2	100	0.000	<7.0	<0.000
201023609-009	C100320N (550-150770-9)		5750	2	100	0.000	<7.0	<0.000
201023609-010	C100320X (550-150770-10)		5750	1	100	0.000	<7.0	<0.000

Kennetch Castro Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

236009

Chain of Custody Record

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10/19/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28906.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 1 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-150770-1
Address: 3113 Red Bluff Road,	Due Date Requested: 10/16/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))/ Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C092820N (550-150770-1)	9/28/20	Eastern		Air			X	1	sample volume = 1166
C092920N (550-150770-2)	9/29/20	Eastern		Air			X	1	sample volume = ~~1300~~ 2600
C093020E (550-150770-3)	9/30/20	Eastern		Air			X	1	sample volume = ~~550~~ 2750
C100120E (550-150770-4)	10/1/20	Eastern		Air			X	1	sample volume = ~~1224~~ 6120
C100120N (550-150770-5)	10/1/20	Eastern		Air			X	1	sample volume = ~~1216~~ 6080
C100220E (550-150770-6)	10/2/20	Eastern		Air			X	1	sample volume = ~~1252~~ 6260
C100220S (550-150770-7)	10/2/20	Eastern		Air			X	1	sample volume = ~~1246~~ 6230
C100320E (550-150770-8)	10/3/20	Eastern		Air			X	1	sample volume = ~~1178~~ 5890
C100320N (550-150770-9)	10/3/20	Eastern		Air			X	1	sample volume = ~~1150~~ 5750

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[illegible] 10-12-20 14:10			Fedex		
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/13/2020 9:45AM	Company EJ3
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

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10/19/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28906.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 2 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-150770-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 10/16/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))/ Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C100320X (550-150770-10)	10/3/20	Eastern		Air			X	1	sample volume = 1150 5750 Per M.V./n.t.

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[illegible] 10-12-20	1410	[illegible]	[illegible]		
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

150770 ASB

10/19/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM REMEDIATIONS		Page 1 of 1	
Contact Name: M. GRIFASI		Sampler Name and Phone Number: DAVID FORSE	
E-Mail Address: ~~MGrifasi@fpm-remediations.com~~ Dforse@fpm-remediations.com	Phone 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: MGrifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature AMB °C FED-EX
Sample Seals Intact: Yes ____ No ____
Sample Seals Intact: Yes ____ No ____
Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150770 Chain of Custody

Analysis Method(s)/Analyte(s)

Asbestos Niosh 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos Niosh 7400
-01	Tube	63	2	C092820N	9-28	0730	1713						1
-02		87	4	C092920N	9-29	0730	1820						1
-03		83	10	C093020E	9-30	0805	1240						1
-04		83	10	C100120E	10-1	0726	1738						1
-05		87	10	C100120N	10-1	0734	1742						1
-06		83	10	C100220E	10-2	0715	1741						1
-07		70	10	C100220S	10-2	0727	1750						1
-08		83	10	C100320E	10-3	0712	1701						1
-09		87	10	C100320N	10-3	0730	1705						1
-10		90	10	C100320X	10-3	0735	1710						1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-9	1700	Dave Forse	
10-10-20	0950		TAMY

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Shipping and Receiving Documents

150770 ASB

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www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM REMEDIATIONS		Page 1 of 1	
Contact Name: M. GRIFASI		Sampler Name and Phone Number: DAVID FORSE	
E-Mail Address: ~~M.Grifasi@fpm-remediations.com~~	Phone 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature 4.5 °C FEDEX

Sample Seals Intact: Yes ____ No ____

Sample Seals Intact: Yes ____ No ____

Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days

____ 1 Business Day ____ 4 Business Days

____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150770 Chain of Custody

Analysis Method(s)/Analyte(s)

Asbestos Niosh 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos Niosh 7400
-01	Tube	63	2	C092820N	9-28	0730	1713						1
-02		87	4	C092920N	9-29	0730	1820						1
-03		83	10	C093020E	9-30	0805	1240						1
-04		83	10	C100120E	10-1	0726	1738						1
-05		87	10	C100120N	10-1	0734	1742						1
-06		83	10	C100220E	10-2	0715	1741						1
-07		70	10	C100220S	10-2	0727	1750						1
-08		83	10	C100320E	10-3	0712	1701						1
-09		87	10	C100320N	10-3	0730	1705						1
-10		90	10	C100320X	10-3	0735	1710						1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-9	1700	Dave Forse	
10/10/20	0950		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

150774

P4

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number:

Company: FPM Remediations		Page 1 of 1	
Contact Name: M, Grifasi		Sampler Name and Phone Number: DAVE FORSE	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.Grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature AMB °C FEDEX

Sample Seals Intact: Yes ____ No ____

Sample Seals Intact: Yes ____ No ____

Total # of Samples: ____

Turn Around Request

____ Same Day ____ 3 Business Days

____ 1 Business Day ____ 4 Business Days

____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-150774 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
-01	FILTER	75	2	C09282ON	9-28	0730	1713						1
-02		84	2	C09292ON	9-29	0730	1820						1
-03		72	2	C09302E	9-30	0805	1240						1
-04		72	2	C10012E	10-1	0726	1738						1
-05		84	2	C10012ON	10-1	0734	1742						1
-06		72	2	C10022E	10-2	0715	1741						1
-07		70	2	C10022S	10-2	0727	1750						1
-08		72	2	C10032E	10-3	0712	1701						1
-09		84	2	C10032ON	10-3	~~0730~~ 0730	1705						1
-10		90	2	C10032X	10-3	0735	1710						1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-9	1700	Dave Forse	
10-10-20	0950		

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

ANALYTICAL REPORT

Job Number: 160-39957-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
11/30/2020 1:16 AM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
11/30/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: FPM Remediations Inc
Job ID: 160-39957-1
Project/Site: BNL Decommissioning Project

Laboratory: Eurofins TestAmerica, Phoenix

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Environmental Lead Laboratory Accreditation Program (ELLAP)	154268	10-01-21
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21
Arizona	State	AZ0728	06-08-21
California	Los Angeles County Sanitation Districts	9254471	06-11-21
California	State	2941	06-09-21
Nevada	State	AZ1030	07-31-21
Oregon	NELAP	AZ100001	03-10-21
USDA	US Federal Programs	P330-19-00227	08-27-22

Method Summary

Client: FPM Remediations Inc
Job ID: 160-39957-1
Project/Site: BNL Decommissioning Project

Method	Method Description	Protocol	Laboratory
NIOSH 7300	NIOSH 7300	NIOSH	TAL PHX
NIOSH 7400 Rev	NIOSH 7400 Rev. 3	NIOSH	J3 RES

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

J3 RES = J3 RESOURCES, INC., 3113 Red Bluff Road, Pasadena, TX 77503

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-39957-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-39957-1	C100520W	Air	10/05/20 17:50	10/16/20 09:40	
160-39957-2	C100620N	Air	10/06/20 16:51	10/16/20 09:40	
160-39957-3	C100720E	Air	10/07/20 16:30	10/16/20 09:40	
160-39957-4	C100720N	Air	10/07/20 16:39	10/16/20 09:40	
160-39957-5	C100820E	Air	10/08/20 17:41	10/16/20 09:40	
160-39957-6	C100920N	Air	10/09/20 17:23	10/16/20 09:40	
160-39957-7	C100920S	Air	10/09/20 17:30	10/16/20 09:40	
160-39957-8	C101020E	Air	10/10/20 11:55	10/16/20 09:40	
160-39957-9	C101020N	Air	10/10/20 12:02	10/16/20 09:40	
160-39957-10	C101020X	Air	10/10/20 12:30	10/16/20 09:40	

Subcontract Data

Pb Analyses

ETA Phoenix

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-151235-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
10/22/2020 6:17:23 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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Visit us at: www.eurofinsus.com/Env

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

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

Job ID: 550-151235-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-151235-1

Comments
No additional comments.

Receipt
The samples were received on 10/16/2020 9:40 AM; the samples arrived in good condition.

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

Industrial Hygiene
Methods 7300, 7303: The spiking solution was inadvertently omitted during the extraction process for the laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) associated with preparation batch 550-223038; therefore, percent recoveries are unavailable. Due to insufficient sample, the affected samples could not be re-prepared and the results have been reported. All instrument QC met acceptance criteria.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-151235-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-151235-1	C100520W	Air	10/05/20 00:00	10/16/20 09:40	
550-151235-2	C100620N	Air	10/06/20 00:00	10/16/20 09:40	
550-151235-3	C100720E	Air	10/07/20 00:00	10/16/20 09:40	
550-151235-4	C100720N	Air	10/07/20 00:00	10/16/20 09:40	
550-151235-5	C100820E	Air	10/08/20 00:00	10/16/20 09:40	
550-151235-6	C100920N	Air	10/09/20 00:00	10/16/20 09:40	
550-151235-7	C100920S	Air	10/09/20 00:00	10/16/20 09:40	
550-151235-8	C101020E	Air	10/10/20 00:00	10/16/20 09:40	
550-151235-9	C101020N	Air	10/10/20 00:00	10/16/20 09:40	
550-151235-10	C101020X	Air	10/10/20 00:00	10/16/20 09:40	

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-151235-1
SDG: 1085-20-01

Client Sample ID: C100520W — Lab Sample ID: 550-151235-1

Date Collected: 10/05/20 00:00 — **Matrix: Air**
Date Received: 10/16/20 09:40
Sample Air Volume: 1138 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000220		* *1	0.250	10/22/20 03:21	1	MGM

Client Sample ID: C100620N — Lab Sample ID: 550-151235-2

Date Collected: 10/06/20 00:00 — **Matrix: Air**
Date Received: 10/16/20 09:40
Sample Air Volume: 1096 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000228		* *1	0.250	10/22/20 03:24	1	MGM

Client Sample ID: C100720E — Lab Sample ID: 550-151235-3

Date Collected: 10/07/20 00:00 — **Matrix: Air**
Date Received: 10/16/20 09:40
Sample Air Volume: 1060 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000236		* *1	0.250	10/22/20 03:28	1	MGM

Client Sample ID: C100720N — Lab Sample ID: 550-151235-4

Date Collected: 10/07/20 00:00 — **Matrix: Air**
Date Received: 10/16/20 09:40
Sample Air Volume: 1042 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**2.32**	**0.00223**		*** *1**	0.250	10/22/20 03:32	1	MGM

Client Sample ID: C100820E — Lab Sample ID: 550-151235-5

Date Collected: 10/08/20 00:00 — **Matrix: Air**
Date Received: 10/16/20 09:40
Sample Air Volume: 1186 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**4.23**	**0.00357**		*** *1**	0.250	10/22/20 03:43	1	MGM

Client Sample ID: C100920N

Lab Sample ID: 550-151235-6

Date Collected: 10/09/20 00:00
Matrix: Air
Date Received: 10/16/20 09:40
Sample Air Volume: 1146 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**0.315**	**0.000275**		***1**	0.250	10/22/20 03:47	1	MGM

Client Sample ID: C100920S

Lab Sample ID: 550-151235-7

Date Collected: 10/09/20 00:00
Matrix: Air
Date Received: 10/16/20 09:40
Sample Air Volume: 1140 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**0.347**	**0.000305**		***1**	0.250	10/22/20 03:51	1	MGM

Client Sample ID: C101020E

Lab Sample ID: 550-151235-8

Date Collected: 10/10/20 00:00
Matrix: Air
Date Received: 10/16/20 09:40
Sample Air Volume: 518 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**26.3**	**0.0507**		***1**	0.250	10/22/20 03:55	1	MGM

Client Sample ID: C101020N

Lab Sample ID: 550-151235-9

Date Collected: 10/10/20 00:00
Matrix: Air
Date Received: 10/16/20 09:40
Sample Air Volume: 514 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	**25.8**	**0.0501**		***1**	0.250	10/22/20 03:58	1	MGM

Client Sample ID: C101020X

Lab Sample ID: 550-151235-10

Date Collected: 10/10/20 00:00
Matrix: Air
Date Received: 10/16/20 09:40
Sample Air Volume: 530 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000472		*1	0.250	10/22/20 04:02	1	MGM

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-151235-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Qualifiers

IH - Metals

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-151235-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
PE-MET-012	NIOSH Method 7300	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Pb

10/22/2020

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151235

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 3153367580	
E-Mail Address:	Phone: 315 3367721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature ____ °C Amb
Sample Seals Intact: Yes ____ No ____ NO
Sample Seals Intact: Yes ____ No ____ IC
Total # of Samples: 10

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days ___X___ 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151235 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb NIOSH 7303
1	FILTER	76	2	C100520W	10-5	0821	1750	569	1138				1
2		84	2	C100620N	10-6	0743	1651	548	1096				1
3		72	2	C100720E	10-7	0740	1630	530	1060				1
4		84	2	C100720N	10-7	0758	1639	521	1042				1
5		72	2	C100820E	10-8	0748	1741	593	1186				1
6		84	2	C100920N	10-9	0750	1723	573	1146				1
7		70	2	C100920S	10-9	0800	1730	570	1140				1
8		72	2	C101020E	10-10	0736	1155	459	518				1
9		84	2	C101020N	10-10	0745	1202	257	514				1
10		91	2	C101020X	10-10	0805	1230	265	530				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-15	1620	Dave Forse	
10/16/20	9:40	FedEx	AK — A-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-151239-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
10/23/2020 3:02:41 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-151239-1
SDG: 1085-20-01

Job ID: 550-151239-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-151239-1

Comments
No additional comments.

Receipt
The samples were received on 10/16/2020 9:40 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023720
Project #: 550-151239-1
Date Received: 19-Oct-2020
Date Analyzed: 23-Oct-2020
Date Reported: 23-Oct-2020

BNL STACK DEMO (10/5)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Counts f/cm3
201023720-001	C100520W (550-151239-1)		5690	3	100	0.000	<7.0	<0.000
201023720-002	C100620N (550-151239-2)		5480	4	100	0.000	<7.0	<0.000
201023720-003	C100720E (550-151239-3)		5300	6	100	0.001	7.6	0.001
201023720-004	C100720N (550-151239-4)		5210	5	100	0.001	<7.0	<0.001
201023720-005	C100820E (550-151239-5)		5930	3	100	0.000	<7.0	<0.000
201023720-006	C100920N (550-151239-6)		5730	3	100	0.000	<7.0	<0.000
201023720-007	C100920S (550-151239-7)		5700	3	100	0.000	<7.0	<0.000
201023720-008	C101020E (550-151239-8)		2590	4	100	0.001	<7.0	<0.001
201023720-009	C101020N (550-151239-9)		2570	4	100	0.001	<7.0	<0.001
201023720-010	C101020X (550-151239-10)		2650	2	100	0.001	<7.0	<0.001

Samantha Harrison Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

23720

Chain of Custody Record

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10/23/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28961.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-151239-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 10/22/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))/ Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C100520W (550-151239-1)	10/5/20	Eastern		Air			X	1	sample volume = 5690L
C100620N (550-151239-2)	10/6/20	Eastern		Air			X	1	sample volume = 5480L
C100720E (550-151239-3)	10/7/20	Eastern		Air			X	1	sample volume = 5300L
C100720N (550-151239-4)	10/7/20	Eastern		Air			X	1	sample volume = 5210L
C100820E (550-151239-5)	10/8/20	Eastern		Air			X	1	sample volume = 5930L
C100920N (550-151239-6)	10/9/20	Eastern		Air			X	1	sample volume = 5730L
C100920S (550-151239-7)	10/9/20	Eastern		Air			X	1	sample volume = 5700L
C101020E (550-151239-8)	10/10/20	Eastern		Air			X	1	sample volume = 2590L
C101020N (550-151239-9)	10/10/20	Eastern		Air			X	1	sample volume = 2570L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Eric 10-16-20	14:40	TA PHX	FedEx		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				10/19/2020 9AM	EJ3
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

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10/23/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-28961.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-151239-1
Address: 3113 Red Bluff Road,	Due Date Requested: 10/22/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C101020X (550-151239-10)	10/10/20	Eastern		Air			X		1	sample volume = 2650L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

ASb

10/23/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151239

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature _____ °C Amb no Ice
Sample Seals Intact: Yes _____ No 2
Sample Seals Intact: Yes _____ No 2
Total # of Samples: 10

Turn Around Request

_____ Same Day _____ 3 Business Days
_____ 1 Business Day _____ 4 Business Days
_____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151239 Chain of Custody

Analysis Method(s)/Analyte(s): ASBESTOS NIOSH 7402

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in.cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	ASBESTOS NIOSH 7402
-01	TUBE	81	10	C100520W	10-5	0821	1750	569	5,690				1
-02		87	10	C100620N	10-6	0743	1651	548	5480				1
-03		83	10	C100720E	10-7	0740	1630	530	5300				1
-04		87	10	C100720N	10-7	0758	1639	521	5210				1
-05		83	10	C100820E	10-8	0748	1741	593	5930				1
-06		87	10	C100920N	10-9	0750	1723	573	5730				1
-07		270	10	C100920S	10-9	0800	1730	570	5700				1
-08		83	10	C101020E	10-10	0736	1155	259	2590				1
-09		87	10	C101020N	10-10	0745	1202	257	2570				1
-10		90	10	C101020X	10-10	0805	1230	265	2650				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-15	1620	Dave Forse	
10/16/20	9:40	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Shipping and Receiving Documents

Pb

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151235

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 3153367580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature ____ °C Amb
Sample Seals Intact: Yes ____ No ____ NO
Sample Seals Intact: Yes ____ No ____ IC
Total # of Samples: 10

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151235 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7303

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb NIOSH 7303
1	FILTER	76	2	C100520W	10-5	0821	1750	569	1138				1
2		84	2	C100620N	10-6	0743	1651	548	1096				1
3		72	2	C100720E	10-7	0740	1630	530	1060				1
4		84	2	C100720N	10-7	0758	1639	521	1042				1
5		72	2	C100820E	10-8	0748	1741	593	1186				1
6		84	2	C100920N	10-9	0750	1723	573	1146				1
7		70	2	C100920S	10-9	0800	1730	570	1140				1
8		72	2	C101020E	10-10	0736	1155	259	518				1
9		84	2	C101020N	10-10	0745	1202	257	514				1
10		91	2	C101020X	10-10	0805	1230	265	530				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-15	1620	Dave Forse	
10/16/13	9:40	FedEx	A-PHL

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TAL-8225 (0414)

A56

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Lab Number: 151239

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address:	Phone: 315 336 7721	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature ____ °C Amb no Ice
Sample Seals Intact: Yes ____ No 2
Sample Seals Intact: Yes ____ No 2
Total # of Samples: 10

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)
Rushes are subject to availability. (Surcharges apply)

550-151239 Chain of Custody

Analysis Method(s)/Analyte(s)

ASBESTOS NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	ASBESTOS NIOSH 7400
-01	TUBE	81	10	C100520W	10-5	0821	1750	569	5690				1
-02		87	10	C100620N	10-6	0743	1651	548	5480				1
-03		83	10	C100720E	10-7	0740	1630	530	5300				1
-04		87	10	C100720N	10-7	0758	1639	521	5210				1
-05		83	10	C100820E	10-8	0748	1741	593	5930				1
-06		87	10	C100920N	10-9	0750	1723	573	5730				1
-07		270	10	C100920S	10-9	0800	1730	570	5700				1
-08		83	10	C101020E	10-10	0736	1155	259	2590				1
-09		87	10	C101020N	10-10	0745	1202	257	2570				1
-10		90	10	C101020X	10-10	0805	1230	265	2650				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-15	1620	Dave Forse	
10/16/20	9:40	Fed Ex	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

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Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-39957-1

Login Number: 39957
List Number: 1
Creator: Vania, Ivan H

List Source: Eurofins TestAmerica, St. Louis

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

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ANALYTICAL REPORT

Job Number: 160-40599-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
11/30/2020 12:11 PM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
11/30/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-40599-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The Pb and asbestos samples were direct shipped to ETA Phoenix and arrived on 10/26/2020 04:30 PM at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 10/28/2020 10:20 AM at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes.

Accreditation/Certification Summary

Client: FPM Remediations Inc
Job ID: 160-40599-1
Project/Site: BNL Decommissioning Project

Laboratory: Eurofins TestAmerica, Phoenix

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Environmental Lead Laboratory Accreditation Program (ELLAP)	154268	10-01-21
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21
Arizona	State	AZ0728	06-08-21
California	Los Angeles County Sanitation Districts	9254471	06-11-21
California	State	2941	06-09-21
Nevada	State	AZ1030	07-31-21
Oregon	NELAP	AZ100001	03-10-21
USDA	US Federal Programs	P330-19-00227	08-27-22

Method Summary

Client: FPM Remediations Inc
Job ID: 160-40599-1
Project/Site: BNL Decommissioning Project

Method	Method Description	Protocol	Laboratory
NIOSH 7300	NIOSH 7300	NIOSH	TAL PHX
NIOSH 7400 Rev	NIOSH 7400 Rev. 3	NIOSH	J3 RES

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

J3 RES = J3 RESOURCES, INC., 3113 Red Bluff Road, Pasadena, TX 77503

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-40599-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-40599-1	C101420E	Air	10/14/20 17:46	10/26/20 01:28	
160-40599-2	C101420N	Air	10/14/20 17:50	10/26/20 01:28	
160-40599-3	C101520N	Air	10/15/20 17:40	10/26/20 01:28	
160-40599-4	C101620S	Air	10/16/20 12:06	10/26/20 01:28	
160-40599-5	C101720S	Air	10/17/20 17:33	10/26/20 01:28	
160-40599-6	C101820N	Air	10/18/20 14:38	10/26/20 01:28	
160-40599-7	C101820W	Air	10/18/20 14:45	10/26/20 01:28	
160-40599-8	C101920N	Air	10/19/20 17:26	10/26/20 01:28	
160-40599-9	C101920W	Air	10/19/20 17:34	10/26/20 01:28	
160-40599-10	C102020S	Air	10/20/20 18:09	10/26/20 01:28	
160-40599-11	C102020W	Air	10/20/20 18:14	10/26/20 01:28	
160-40599-12	C102020X	Air	10/20/20 18:20	10/26/20 01:28	

Subcontract Data

Pb Analyses

ETA Phoenix

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-151760-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL Stack Demo

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
11/12/2020 11:34:23 AM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Job ID: 550-151760-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-151760-1

Comments
No additional comments.

Receipt
The samples were received on 10/26/2020 4:30 PM; the samples arrived in good condition.

Receipt Exceptions

The total volume calculated by the laboratory using the start/stop time and flow rate listed on the Chain of Custody (COC) did not match the values listed in the Total Volume column for the following sample: C101720S (550-151760-5). The sample(s) were logged in using the total Volume listed on the Chain of Custody.

Package delivered 10/26/20 Monday. Label indicated it should have been delivered on Saturday, 10/24/20. However, it was miss delivered, opened by another party, re-taped closed, returned to FedEx who then delivered it to TA Phoenix at 16:30 on 10/26/20, Monday. The client was notified.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-223836 and analytical batch 550-224739.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-151760-1	C1014Z0E	Air	10/14/20 00:00	10/26/20 16:30	
550-151760-2	C101420N	Air	10/14/20 00:00	10/26/20 16:30	
550-151760-3	C101520N	Air	10/15/20 00:00	10/26/20 16:30	
550-151760-4	C101620S	Air	10/16/20 00:00	10/26/20 16:30	
550-151760-5	C101720S	Air	10/17/20 00:00	10/26/20 16:30	
550-151760-6	C101820N	Air	10/18/20 00:00	10/26/20 16:30	
550-151760-7	C101820W	Air	10/18/20 00:00	10/26/20 16:30	
550-151760-8	C101920N	Air	10/19/20 00:00	10/26/20 16:30	
550-151760-9	C101920W	Air	10/19/20 00:00	10/26/20 16:30	
550-151760-10	C102020S	Air	10/20/20 00:00	10/26/20 16:30	
550-151760-11	C102020W	Air	10/20/20 00:00	10/26/20 16:30	
550-151760-12	C102020X	Air	10/20/20 00:00	10/26/20 16:30	

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Client Sample ID: C1014Z0E — Lab Sample ID: 550-151760-1

Date Collected: 10/14/20 00:00 — **Matrix: Air**
Date Received: 10/26/20 16:30
Sample Air Volume: 1256 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000199			0.250	11/04/20 14:32	1	MGM

Client Sample ID: C101420N — Lab Sample ID: 550-151760-2

Date Collected: 10/14/20 00:00 — **Matrix: Air**
Date Received: 10/26/20 16:30
Sample Air Volume: 1250 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000200			0.250	11/04/20 14:42	1	MGM

Client Sample ID: C101520N — Lab Sample ID: 550-151760-3

Date Collected: 10/15/20 00:00 — **Matrix: Air**
Date Received: 10/26/20 16:30
Sample Air Volume: 1190 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000210			0.250	11/04/20 14:46	1	MGM

Client Sample ID: C101620S — Lab Sample ID: 550-151760-4

Date Collected: 10/16/20 00:00 — **Matrix: Air**
Date Received: 10/26/20 16:30
Sample Air Volume: 552 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000453			0.250	11/04/20 14:50	1	MGM

Client Sample ID: C101720S — Lab Sample ID: 550-151760-5

Date Collected: 10/17/20 00:00 — **Matrix: Air**
Date Received: 10/26/20 16:30
Sample Air Volume: 1090 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000229			0.250	11/04/20 15:01	1	MGM

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Client Sample ID: C101820N
Lab Sample ID: 550-151760-6

Date Collected: 10/18/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 852 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000293			0.250	11/04/20 15:05	1	MGM

Client Sample ID: C101820W
Lab Sample ID: 550-151760-7

Date Collected: 10/18/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 840 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000298			0.250	11/04/20 15:09	1	MGM

Client Sample ID: C101920N
Lab Sample ID: 550-151760-8

Date Collected: 10/19/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 1194 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000209			0.250	11/04/20 15:12	1	MGM

Client Sample ID: C101920W
Lab Sample ID: 550-151760-9

Date Collected: 10/19/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 1182 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000212			0.250	11/04/20 15:16	1	MGM

Client Sample ID: C102020S
Lab Sample ID: 550-151760-10

Date Collected: 10/20/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 1072 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000233			0.250	11/04/20 15:20	1	MGM

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Client Sample ID: C102020W

Lab Sample ID: 550-151760-11

Date Collected: 10/20/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 1068 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000234			0.250	11/04/20 15:24	1	MGM

Client Sample ID: C102020X

Lab Sample ID: 550-151760-12

Date Collected: 10/20/20 00:00
Matrix: Air
Date Received: 10/26/20 16:30
Sample Air Volume: 1070 L
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000234			0.250	11/04/20 15:28	1	MGM

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151760-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
PE-MET-012	NIOSH Method 7300	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Pb

11/12/2020

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151760

Company: FPM Remediations	Page 1 of 1		
Contact Name: Mike Grifasi	Sampler Name and Phone Number: Dave Forse 315 336 7580		
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature _____ °C Amb
Sample Seals Intact: Yes ____ No X No
Sample Seals Intact: Yes ____ No X
Total # of Samples: 12 Ice

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151760 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7300

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb NIOSH 7300
1	FILTER	72	2	C101420E	10-14	0718	1746	628	1256				1
2		84	2	C101420N	10-14	0725	1750	625	1250				1
3		84	2	C101520N	10-15	0745	1740	595	1190				1
4		70	2	C101620S	10-16	0730	1206	276	552				1
5		70	2	C101720S	10-17	0819	1733	545	1090				1
6		84	2	C101820N	10-18	0732	1438	426	852				1
7		76	2	C101820W	10-18	0745	1445	420	840				1
8		84	2	C101920N	10-19	0729	1726	597	1194				1
9		76	2	C101920W	10-19	0743	1734	591	1182				1
10		70	2	C102020S	10-20	0913	1809	536	1072				1
11		76	2	C102020W	10-20	0920	1814	534	1068				1
12		90	2	C102020X	10-20	0925	1820	535	1070				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-23	12:30	Dave Forse	
10/26/20	11:30	Fed Ex	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Page 10 of 99

Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-151761-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL Stack Demo

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
11/4/2020 6:32:56 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL Stack Demo

Job ID: 550-151761-1
SDG: 1085-20-01

Job ID: 550-151761-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-151761-1

Comments
No additional comments.

Receipt
The samples were received on 10/26/2020 4:30 PM; the samples arrived in good condition.

Receipt Exceptions

The total volume calculated by the laboratory using the start/stop time and flow rate listed on the Chain of Custody (COC) did not match the values listed in the Total Volume column for the following sample: C101720S (550-151761-5). The sample(s) were logged in using the total Volume calculated by the laboratory.

Package delivered 10/26/20 Monday. Label indicated it should have been delivered on Saturday, 10/24/20. However, it was miss delivered, opened by another party, re-taped closed, returned to FedEx who then delivered it to TA Phoenix at 16:30 on 10/26/20, Monday. The client was notified.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201023916
Project #: 550-151761-1
Date Received: 28-Oct-2020
Date Analyzed: 03-Nov-2020
Date Reported: 03-Nov-2020

BNL Stack Demo (10/14)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Fiber Counts f/cm3
201023916-001	C101420E (550-151761-1)		6280	1.5	100	0.000	<7.0	<0.000
201023916-002	C101420N (550-151761-2)		6250	1.5	100	0.000	<7.0	<0.000
201023916-003	C101520N (550-151761-3)		5950	4	100	0.000	<7.0	<0.000
201023916-004	C101620S (550-151761-4)		2760	0.5	100	0.001	<7.0	<0.001
201023916-005	C101720S (550-151761-5)		5450	0.5	100	0.000	<7.0	<0.000
201023916-006	C101820N (550-151761-6)		4260	1	100	0.001	<7.0	<0.001
201023916-007	C101820W (550-151761-7)		4200	1	100	0.001	<7.0	<0.001
201023916-008	C101920N (550-151761-8)		5970	0.5	100	0.000	<7.0	<0.000
201023916-009	C101920W (550-151761-9)		5910	0	100	0.000	<7.0	<0.000
201023916-010	C102020S (550-151761-10)		5360	0	100	0.001	<7.0	<0.001
201023916-011	C102020W (550-151761-11)		5340	0.5	100	0.001	<7.0	<0.001
201023916-012	C102020X (550-151761-12)		5350	0	100	0.001	<7.0	<0.001

Duane Salinas Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

23916

Chain of Custody Record

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11/4/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-29043.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 1 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-151761-1
Address: 3113 Red Bluff Road,	Due Date Requested: 10/30/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Stack Demo	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400)) / Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C101420E (550-151761-1)	10/14/20	Central		Air			X	1	Sample Volume = 6280 L
C101420N (550-151761-2)	10/14/20	Central		Air			X	1	Sample Volume = 6250 L
C101520N (550-151761-3)	10/15/20	Central		Air			X	1	Sample Volume = 5950 L
C101620S (550-151761-4)	10/16/20	Central		Air			X	1	Sample Volume = 2760 L
C101720S (550-151761-5)	10/17/20	Central		Air			X	1	Sample Volume = 5450 L
C101820N (550-151761-6)	10/18/20	Central		Air			X	1	Sample Volume = 4260 L
C101820W (550-151761-7)	10/18/20	Central		Air			X	1	Sample Volume = 4200 L
C101920N (550-151761-8)	10/19/20	Central		Air			X	1	Sample Volume = 5970 L
C101920W (550-151761-9)	10/19/20	Central		Air			X	1	Sample Volume = 5910 L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

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11/4/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-29043.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: Missouri	Page: Page 2 of 2
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-151761-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 10/30/2020	Analysis Requested		Preservation Codes:
City: Pasadena	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: TX, 77503				Other:
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Stack Demo	Project #: 55014976			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C102020S (550-151761-10)	10/20/20	Central		Air			X		1	Sample Volume = 5360 L
C102020W (550-151761-11)	10/20/20	Central		Air			X		1	Sample Volume = 5340 L
C102020X (550-151761-12)	10/20/20	Central		Air			X		1	Sample Volume = 5350 L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Emeto-27-20 1450		TA-Phx	Fedex		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

AS

11/4/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151761

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 315 336 7580	
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.grifasi@fpm.remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature ____ °C Amb
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X no ice
Total # of Samples: 12

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151761 Chain of Custody

Analysis Method(s)/Analyte(s)

ASBESTOS NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	ASBESTOS NIOSH 7400
1	Tube	83	10	C1014 20 E	10-14	0718	1746	628	6280				1
2		87	10	C1014 20 N	10-14	0725	1750	625	6250				1
3		87	10	C1015 20 N	10-15	0745	1740	595	5950				1
4		270	10	C1016 20 S	10-16	0730	1206	276	2760				1
5		270	10	C1017 20 S	10-17	0819	1733	545	5450				1
6		87	10	C1018 20 N	10-18	0732	1438	426	4260				1
7		81	10	C1018 20 W	10-18	0745	1445	420	4200				1
8		87	10	C1019 20 N	10-19	0729	1726	597	5970				1
9		81	10	C1019 20 W	10-19	0743	1734	591	5910				1
10		270	10	C1020 20 S	10-20	0913	1809	536	5360				1
11		81	10	C1020 20 W	10-20	0920	1814	534	5340				1
12		98	10	C1020 20 X	10-20	0925	1820	535	5350				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-23	12:30	Dave Forse	
10/24/20	16:30	Fedex	Lisa Maycock TA PITT

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Shipping and Receiving Documents

AS

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151761

Company: FPM Remediations		Page 1 of 1	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE 3153367580	
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To: M. Grifasi	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: M.grifasi@fpm.remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature ____ °C Amb
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X no ice
Total # of Samples: 12

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-151761 Chain of Custody

Analysis Method(s)/Analyte(s): ASBESTOS NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	
1	Tube	83	10	C10142OE	10-14	0718	1746	628	6280				1
2		87	10	C10142ON	10-14	0725	1750	625	6250				1
3		89	10	C10152ON	10-15	0745	1740	595	5950				1
4		270	10	C10162OS	10-16	0730	1206	276	2760				1
5		270	10	C10172OS	10-17	0819	1733	545	5450				1
6		87	10	C10182ON	10-18	0732	1438	426	4260				1
7		81	10	C10182OW	10-18	0745	1445	420	4200				1
8		87	10	C10192ON	10-19	0729	1726	597	5970				1
9		81	10	C10192OW	10-19	0743	1734	591	5910				1
10		270	10	C10202OS	10-20	0913	1809	536	5360				1
11		81	10	C10202OW	10-20	0920	1814	534	5340				1
12		98	10	C10202OX	10-20	0925	1820	535	5350				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-23	12:30	Dave Forse	
10/26/20	1630	Fedex	Lisa Maycock TA PLSC

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Pb

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 151760

Company: FPM Remediations		Page 1 of 1	
Contact Name: Mike Grifasi		Sampler Name and Phone Number: Dave Forse 315 336 7580	
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: ONEIDA NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature _____ °C Amb
Sample Seals Intact: Yes ____ No X No
Sample Seals Intact: Yes ____ No X
Total # of Samples: 12 Ice

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)
Rushes are subject to availability. (Surcharges apply)

550-151760 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb NIOSH 7300

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
1	FILTER	72	2	C101420E	10-14	0718	1746	628	1256				1
2		84	2	C101420N	10-14	0725	1750	625	1250				1
3		84	2	C101520N	10-15	0745	1740	595	1190				1
4		70	2	C101620S	10-16	0730	1206	276	552				1
5		70	2	C101720S	10-17	0819	1733	545	1090				1
6		84	2	C101820N	10-18	0732	1438	426	852				1
7		76	2	C101820W	10-18	0745	1445	420	840				1
8		84	2	C101920N	10-19	0729	1726	597	1194				1
9		76	2	C101920W	10-19	0743	1734	591	1182				1
10		70	2	C102020S	10-20	0913	1809	536	1072				1
11		76	2	C102020W	10-20	0920	1814	534	1068				1
12		90	2	C102020X	10-20	0925	1820	535	1070				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
10-23	12:30	Dave Forse	
10/24/20	11:30	Fed Ex	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-40599-1

Login Number: 40599
List Number: 1
Creator: Vania, Ivan H

List Source: Eurofins TestAmerica, St. Louis

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

ANALYTICAL REPORT

Job Number: 160-40673-1

Job Description: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, NY 13421

Attention: Michael Grifasi



Approved for release.
Ivan H Vania
Project Manager II
12/28/2020 11:39 AM

Ivan H Vania, Project Manager II
13715 Rider Trail North, Earth City, MO, 63045
(314)298-8566
Ivan.Vania@Eurofinset.com
12/28/2020

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. Pursuant to NELAP, this report shall not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. All questions regarding this report should be directed to the Eurofins TestAmerica Project Manager.

Louisiana Lab Certification ID (Non-Potable, Solid/Haz. Material): 106151
Florida Lab Certification ID (Drinking Water): E87689.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-40673-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The samples were direct shipped to ETA Phoenix and arrived on 12/01/2020 at ambient temperature. The asbestos samples were forwarded to J3 Resources, Inc and arrived on 12/03/2020 at ambient temperature. All samples arrived in good condition.

SUBCONTRACTED ANALYSES

Refer to the subcontract section of the report for each lab's data and analysis notes

Accreditation/Certification Summary

Client: FPM Remediations Inc
Job ID: 160-40673-1
Project/Site: BNL Decommissioning Project

Laboratory: Eurofins TestAmerica, Phoenix

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Environmental Lead Laboratory Accreditation Program (ELLAP)	154268	10-01-21
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21
Arizona	State	AZ0728	06-08-21
California	Los Angeles County Sanitation Districts	9254471	06-11-21
California	State	2941	06-09-21
Nevada	State	AZ1030	07-31-21
Oregon	NELAP	AZ100001	03-10-21
USDA	US Federal Programs	P330-19-00227	08-27-22

Method Summary

Client: FPM Remediations Inc
Job ID: 160-40673-1
Project/Site: BNL Decommissioning Project

Method	Method Description	Protocol	Laboratory
NIOSH 7300	NIOSH 7300	NIOSH	TAL PHX
NIOSH 7400 Rev	NIOSH 7400 Rev. 3	NIOSH	J3 RES

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

J3 RES = J3 RESOURCES, INC., 3113 Red Bluff Road, Pasadena, TX 77503

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-40673-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-40673-1	C102120N	Air	10/21/20 17:19	12/01/20 11:10	
160-40673-2	C102220N	Air	10/22/20 17:35	12/01/20 11:10	
160-40673-3	C102320W	Air	10/23/20 17:20	12/01/20 11:10	
160-40673-4	C102320N	Air	10/23/20 17:35	12/01/20 11:10	
160-40673-5	C102420E	Air	10/24/20 17:05	12/01/20 11:10	
160-40673-6	C102420W	Air	10/24/20 17:10	12/01/20 11:10	
160-40673-7	C102620W	Air	10/26/20 17:03	12/01/20 11:10	
160-40673-8	C102720E	Air	10/27/20 17:30	12/01/20 11:10	
160-40673-9	C102720S	Air	10/27/20 17:25	12/01/20 11:10	
160-40673-10	C102820E	Air	10/28/20 17:08	12/01/20 11:10	
160-40673-11	C102820W	Air	10/28/20 17:20	12/01/20 11:10	
160-40673-12	C103120N	Air	10/31/20 17:15	12/01/20 11:10	
160-40673-13	C103120S	Air	10/31/20 17:18	12/01/20 11:10	
160-40673-14	C110120N	Air	11/01/20 14:09	12/01/20 11:10	
160-40673-15	C110220E	Air	11/02/20 17:05	12/01/20 11:10	
160-40673-16	C110420N	Air	11/04/20 17:29	12/01/20 11:10	
160-40673-17	C110520N	Air	11/05/20 17:28	12/01/20 11:10	
160-40673-18	C110620N	Air	11/06/20 17:09	12/01/20 11:10	
160-40673-19	C111620E	Air	11/16/20 15:35	12/01/20 11:10	
160-40673-20	C111620X	Air	11/16/20 15:00	12/01/20 11:10	

Subcontract Data

Pb Analyses

ETA Phoenix

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-153847-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Authorized for release by:
12/8/2020 11:10:54 AM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Job ID: 550-153847-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-153847-1

Comments
No additional comments.

Receipt
The samples were received on 12/1/2020 11:10 AM; the samples arrived in good condition.

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

Industrial Hygiene
Method 7300: The Method Blank, Field Blank (or other QC results) were not used to correct client sample results associated with preparation batch 550-226997 and analytical batch 550-227320.

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

Sample Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
550-153847-1	C102120N	Air	10/21/20 00:00	12/01/20 11:10	
550-153847-2	C102220N	Air	10/22/20 00:00	12/01/20 11:10	
550-153847-3	C102320W	Air	10/23/20 00:00	12/01/20 11:10	
550-153847-4	C102320N	Air	10/23/20 00:00	12/01/20 11:10	
550-153847-5	C102420E	Air	10/24/20 00:00	12/01/20 11:10	
550-153847-6	C102420N	Air	10/24/20 00:00	12/01/20 11:10	
550-153847-7	C102620W	Air	10/26/20 00:00	12/01/20 11:10	
550-153847-8	C102720E	Air	10/27/20 00:00	12/01/20 11:10	
550-153847-9	C102720S	Air	10/27/20 00:00	12/01/20 11:10	
550-153847-10	C102820E	Air	10/28/20 00:00	12/01/20 11:10	
550-153847-11	C102820W	Air	10/28/20 00:00	12/01/20 11:10	
550-153847-12	C103120N	Air	10/31/20 00:00	12/01/20 11:10	
550-153847-13	C103120S	Air	10/31/20 00:00	12/01/20 11:10	
550-153847-14	C110120N	Air	11/01/20 00:00	12/01/20 11:10	
550-153847-15	C110220E	Air	11/02/20 00:00	12/01/20 11:10	
550-153847-16	C110420N	Air	11/04/20 00:00	12/01/20 11:10	
550-153847-17	C110520N	Air	11/05/20 00:00	12/01/20 11:10	
550-153847-18	C110620N	Air	11/06/20 00:00	12/01/20 11:10	
550-153847-19	C111620E	Air	11/16/20 00:00	12/01/20 11:10	
550-153847-20	C111620X	Air	11/16/20 00:00	12/01/20 11:10	

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Client Sample ID: C102120N — Lab Sample ID: 550-153847-1

Date Collected: 10/21/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1142 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000219			0.250	12/04/20 17:32	1	MGM

Client Sample ID: C102220N — Lab Sample ID: 550-153847-2

Date Collected: 10/22/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1190 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000210			0.250	12/04/20 17:36	1	MGM

Client Sample ID: C102320W — Lab Sample ID: 550-153847-3

Date Collected: 10/23/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1180 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000212			0.250	12/04/20 17:39	1	MGM

Client Sample ID: C102320N — Lab Sample ID: 550-153847-4

Date Collected: 10/23/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1176 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000213			0.250	12/04/20 17:43	1	MGM

Client Sample ID: C102420E — Lab Sample ID: 550-153847-5

Date Collected: 10/24/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1142 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000219			0.250	12/04/20 17:47	1	MGM

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Client Sample ID: C102420N — Lab Sample ID: 550-153847-6

Date Collected: 10/24/20 00:00
Date Received: 12/01/20 11:10
Sample Air Volume: 1142 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000219			0.250	12/04/20 17:51	1	MGM

Client Sample ID: C102620W — Lab Sample ID: 550-153847-7

Date Collected: 10/26/20 00:00
Date Received: 12/01/20 11:10
Sample Air Volume: 1166 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000214			0.250	12/04/20 17:55	1	MGM

Client Sample ID: C102720E — Lab Sample ID: 550-153847-8

Date Collected: 10/27/20 00:00
Date Received: 12/01/20 11:10
Sample Air Volume: 1190 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000210			0.250	12/04/20 17:58	1	MGM

Client Sample ID: C102720S — Lab Sample ID: 550-153847-9

Date Collected: 10/27/20 00:00
Date Received: 12/01/20 11:10
Sample Air Volume: 1190 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000210			0.250	12/04/20 18:02	1	MGM

Client Sample ID: C102820E — Lab Sample ID: 550-153847-10

Date Collected: 10/28/20 00:00
Date Received: 12/01/20 11:10
Sample Air Volume: 476 L

Matrix: Air
Sample Container: IH - MCE, 0.8 micron, 37-mm Filter

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000525			0.250	12/04/20 18:06	1	MGM

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Client Sample ID: C102820W — Lab Sample ID: 550-153847-11

Date Collected: 10/28/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 460 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000543			0.250	12/04/20 18:17	1	MGM

Client Sample ID: C103120N — Lab Sample ID: 550-153847-12

Date Collected: 10/31/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1138 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000220			0.250	12/04/20 18:21	1	MGM

Client Sample ID: C103120S — Lab Sample ID: 550-153847-13

Date Collected: 10/31/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1136 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000220			0.250	12/04/20 18:25	1	MGM

Client Sample ID: C110120N — Lab Sample ID: 550-153847-14

Date Collected: 11/01/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 754 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000332			0.250	12/04/20 18:29	1	MGM

Client Sample ID: C110220E — Lab Sample ID: 550-153847-15

Date Collected: 11/02/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 340 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000735			0.250	12/04/20 18:32	1	MGM

Client Sample Results

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Client Sample ID: C110420N — Lab Sample ID: 550-153847-16

Date Collected: 11/04/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1162 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000215			0.250	12/04/20 18:36	1	MGM

Client Sample ID: C110520N — Lab Sample ID: 550-153847-17

Date Collected: 11/05/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 1176 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000213			0.250	12/04/20 18:40	1	MGM

Client Sample ID: C110620N — Lab Sample ID: 550-153847-18

Date Collected: 11/06/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 962 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000260			0.250	12/04/20 18:44	1	MGM

Client Sample ID: C111620E — Lab Sample ID: 550-153847-19

Date Collected: 11/16/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 898 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000278			0.250	12/04/20 18:47	1	MGM

Client Sample ID: C111620X — Lab Sample ID: 550-153847-20

Date Collected: 11/16/20 00:00 — **Matrix: Air**
Date Received: 12/01/20 11:10
Sample Air Volume: 840 L — **Sample Container: IH - MCE, 0.8 micron, 37-mm Filter**

Method: PE-MET-012 - NIOSH Method 7300

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Lead	<0.250	<0.000298			0.250	12/04/20 18:51	1	MGM

Accreditation/Certification and Definitions Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Laboratory: Eurofins TestAmerica, Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	154268	10-01-21

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153847-1
SDG: 1085-20-01

Method	Method Description	Protocol	Laboratory
PE-MET-012	NIOSH Method 7300	NIOSH	TAL PHX
Filter Prep	Preparation, IH Filter	NIOSH	TAL PHX

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994 and it's Supplements

Laboratory References:

TAL PHX = Eurofins TestAmerica, Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Pb

12/8/2020

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

Lab Number: 153847

Company: FPM Remediations		Page 1 of 2	
Contact Name: M. Grifasi		Sampler Name and Phone Number: David Forse 315 336 7580	
E-Mail Address:	Phone: 3153367721	Project Name: BNL STACK Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C No Ice
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 30

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-153847 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb 7300 NIOSH

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb 7300 NIOSH
	FILTER	84	2	C102120N	10-21	0748	1719						X
		84	2	C102220N	10-22	0740	1735						
		76	2	C102320W	10-23	0730	1720						
		84	2	C102320N	10-23	0745	1733						
		72	2	C102420E	10-24	0734	1705						
		84	2	C102420N	10-24	0739	1710						
		76	2	C102620W	10-26	0720	1703						
		72	2	C102720E	10-27	0735	1730						
		70	2	C102720S	10-27	0730	1725						
		72	2	C102820E	10-28	1310	1708						
		76 DF	2	C102820W	10-28	1330	1720						
		84	2	C103120N	10-31	0746	1715						
		70	2	C103120S	10-31	0750	1718						X

Instructions / Special Requirements:

DF

Date:	Time:	Samples Relinquished By:	Received By:
10-23 30	1900	Dave Forse	
12/1/20	1110	FedEx	

All services are performed subject to the Terms & Conditions on the reverse side.

TA-PHX

TAL-8225 (0414)

Pb

12/8/2020

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Eurofins TestAmerica Laboratories, Inc.; Phoenix Laboratory - 4625 E. Cotton Center Blvd. Suite 189, Phoenix, AZ 85040 602.437.3340 Fax 602.454.9303
www.testamericainc.com or Call 1.866.772.5227

AG 12/1/20

Lab Number: ~~153874~~ 153847

Company: FPM Remediations		Page 2 of 2	
Contact Name: M. Gritasi		Sampler Name and Phone Number: DAVID FORSE	
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip:		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature A-rb °C no ice
Sample Seals Intact: Yes ____ No N/A
Sample Seals Intact: Yes ____ No N/A
Total # of Samples: 2

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

Analysis Method(s)/Analyte(s)

Pb Niosh 7300

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb
	FILTER	84	2	C11012ON	11-1	0752	1409						X
		72	2	C11022OE	11-2	1415	1705						
		84	2	C11042ON	11-4	0748	1729						
		84	2	C11052ON	11-5	0740	1728						
		84	2	C11062ON	11-6	0908	1709						
		72	2	C11162OE	11-16	0806	1535						
		96	2	C11162OX	11-16	0800	1500						X

NO MORE SAMPLES

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-30	1400	Dave Forse	
12/1/20	11:10	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Asbestos Analyses

J3 Resources

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ANALYTICAL REPORT

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-153852-1
Laboratory Sample Delivery Group: 1085-20-01
Client Project/Site: BNL STACK DEMO

For:
TestAmerica Laboratories, Inc.
13715 Rider Trail North
Earth City, Missouri 63045

Attn: Mr. Ivan Vania

Carlene McCutcheon

Authorized for release by:
12/8/2020 4:10:18 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
Carlene.McCutcheon@Eurofinset.com

LINKS

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

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

Case Narrative

Client: TestAmerica Laboratories, Inc.
Project/Site: BNL STACK DEMO

Job ID: 550-153852-1
SDG: 1085-20-01

Job ID: 550-153852-1

Laboratory: Eurofins TestAmerica, Phoenix

Narrative

Job Narrative
550-153852-1

Comments
No additional comments.

Receipt
The samples were received on 12/1/2020 11:10 AM; the samples arrived in good condition.

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

Subcontract Work
Method Asbestos and other Fibers (NIOSH 7400): This method was subcontracted to J3 RESOURCES, INC.. The subcontract laboratory certification is different from that of the facility issuing the final report.

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201024523
Project #: 550-153852-1
Date Received: 03-Dec-2020
Date Analyzed: 08-Dec-2020
Date Reported: 08-Dec-2020

BNL STACK DEMO (10/21)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Fiber Counts f/cm3
201024523-001	C102120N (550-153852-1)		5710	2	100	0.000	<7.0	<0.000
201024523-002	C102220N (550-153852-2)		5950	2	100	0.000	<7.0	<0.000
201024523-003	C102320W (550-153852-3)		5900	3	100	0.000	<7.0	<0.000
201024523-004	C102320N (550-153852-4)		5900	2	100	0.000	<7.0	<0.000
201024523-005	C102420E (550-153852-5)		5710	3	100	0.000	<7.0	<0.000
201024523-006	C102420N (550-153852-6)		5710	4	100	0.000	<7.0	<0.000
201024523-007	C102620W (550-153852-7)		5830	3	100	0.000	<7.0	<0.000
201024523-008	C102720E (550-153852-8)		5950	3	100	0.000	<7.0	<0.000
201024523-009	C102720S (550-153852-9)	VOID - Blown Filter	5950					
201024523-010	C102820E (550-153852-10)		2380	2	100	0.001	<7.0	<0.001
201024523-011	C102820W (550-153852-11)		2300	2	100	0.001	<7.0	<0.001
201024523-012	C103120N (550-153852-12)		5690	1	100	0.000	<7.0	<0.000
201024523-013	C103120S (550-153852-13)		5680	2	100	0.000	<7.0	<0.000

Shervin Aghaabbasi Analyst

Scott Ward, Ph.D. Lab Director

This report relates only to the samples tested. This report is for the exclusive use of the addressed client and shall not be reproduced except in full, without written approval by J3 Resources, Inc. (J3). J3 is not responsible for results reported in fibers per cubic centimeter (f/cm3) which is dependent on volumes provided by non-laboratory personnel. All samples received in good condition unless otherwise noted. This report shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.
Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 AIHA Lab ID: 157714 TDSHS License: 30-0273

J3 Resources, Inc.
3113 Red Bluff Road, Pasadena, TX 77503
Phone: (713) 290-0223 - Fax: (713) 290-0248
J3Resources.com

Airborne Asbestos and Other Fibers by Phase Contrast Microscopy (PCM)

NIOSH 7400 Issue 2: 15-Aug-1994

Carlene McCutcheon
Eurofins TestAmerica, Phoenix
4625 E. Cotton Center Blvd., Ste 189
Phoenix AZ 85040

J3 Order #: JP201024523
Project #: 550-153852-1
Date Received: 03-Dec-2020
Date Analyzed: 08-Dec-2020
Date Reported: 08-Dec-2020

BNL STACK DEMO (10/21)

Lab ID#	Sample ID#	Description	Volume (liters)	Total Fibers	Total Fields	LOD f/cm3	Fiber Counts f/mm2	Counts f/cm3
201024523-014	C110120N (550-153852-14)		3770	1	100	0.001	<7.0	<0.001
201024523-015	C110220E (550-153852-15)		1700	3	100	0.002	<7.0	<0.002
201024523-016	C110420N (550-153852-16)		5810	9	100	0.000	11.5	0.001
201024523-017	C110520N (550-153852-17)		5880	4	100	0.000	<7.0	<0.000
201024523-018	C110620N (550-153852-18)		4810	6	100	0.001	7.6	0.001
201024523-019	C111620E (550-153852-19)		4490	6	100	0.001	7.6	0.001
201024523-020	C111620X (550-153852-20)		4200	2	100	0.001	<7.0	<0.001

Shervin Aghaabbasi Analyst

Scott Ward, Ph.D. Lab Director

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Limit of Detection (LOD) = 5.5 fibers per 100 fields. Intra-Lab CV = 0.34; Inter-Lab CV = 0.45.

NVLAP Lab Code: 600120-0 **AIHA Lab ID: 157714** **TDSHS License: 30-0273**

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

24523

Chain of Custody Record

eurofins | Environment Testing America

12/8/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-29323.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-153852-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 12/8/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))/ Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C102120N (550-153852-1)	10/21/20	Eastern		Air			X	1	sample volume = 5710L
C102220N (550-153852-2)	10/22/20	Eastern		Air			X	1	sample volume = 5950L
C102320W (550-153852-3)	10/23/20	Eastern		Air			X	1	sample volume = 5900L
C102320N (550-153852-4)	10/23/20	Eastern		Air			X	1	sample volume = 5900L
C102420E (550-153852-5)	10/24/20	Eastern		Air			X	1	sample volume = 5710L
C102420N (550-153852-6)	10/24/20	Eastern		Air			X	1	sample volume = 5710L
C102620W (550-153852-7)	10/26/20	Eastern		Air			X	1	sample volume = 5830L
C102720E (550-153852-8)	10/27/20	Eastern		Air			X	1	sample volume = 5950L
C102720S (550-153852-9)	10/27/20	Eastern		Air			X	1	sample volume = 5950L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by: Erin 12-02-20	13:35	TA	Received by: Fedex		
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 12/3/2020 2:48PM	Company EJ3
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

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12/8/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-29323.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 2 of 3
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-153852-1
Address: 3113 Red Bluff Road,	Due Date Requested: 12/8/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400)) / Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
C102820E (550-153852-10)	10/28/20	Eastern		Air			X	1	sample volume = 2380L
C102820W (550-153852-11)	10/28/20	Eastern		Air			X	1	sample volume = 2300L
C103120N (550-153852-12)	10/31/20	Eastern		Air			X	1	sample volume = 5690L
C103120S (550-153852-13)	10/31/20	Eastern		Air			X	1	sample volume = 5680L
C110120N (550-153852-14)	11/1/20	Eastern		Air			X	1	sample volume = 3770L
C110220E (550-153852-15)	11/2/20	Eastern		Air			X	1	sample volume = 1700L
C110420N (550-153852-16)	11/4/20	Eastern		Air			X	1	sample volume = 5810L
C110520N (550-153852-17)	11/5/20	Eastern		Air			X	1	sample volume = 5880L
C110620N (550-153852-18)	11/6/20	Eastern		Air			X	1	sample volume = 4810L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: 12-02-20 13:35		TA-PHX	Received by: Fedex		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica, Phoenix
4625 East Cotton Ctr Blvd Suite 189
Phoenix, AZ 85040
Phone: 602-437-3340 Fax: 602-454-9303

Chain of Custody Record

eurofins | Environment Testing America

12/8/2020

Client Information (Sub Contract Lab)	Sampler:	Lab PM: McCutcheon, Carlene	Carrier Tracking No(s):	COC No: 550-29323.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Carlene.McCutcheon@Eurofinset.com	State of Origin: New York	Page: Page 3 of 3
Company: J3 RESOURCES, INC.		Accreditations Required (See note): Industrial Hygiene Laboratory Ac - AIHA-LAP, LLC		Job #: 550-153852-1
Address: 3113 Red Bluff Road, ,	Due Date Requested: 12/8/2020			
City: Pasadena	TAT Requested (days):			
State, Zip: TX, 77503				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL STACK DEMO	Project #: 55014976			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos and other Fibers (NIOSH 7400))	Asbestos and other Fibers (NIOSH 7400)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
C111620E (550-153852-19)	11/16/20	Eastern		Air			X		1	sample volume = 4490L
C111620X (550-153852-20)	11/16/20	Eastern		Air			X		1	sample volume = 4200L

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

ASB

12/8/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 153852

Company: FPM Remediations		Page 1 of 2	
Contact Name: Mike Grifasi		Sampler Name and Phone Number: DAVID FORSE 315 336 7580	
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb no — +ce
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 20

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-153852 Chain of Custody

Analysis Method(s)/Analyte(s)

Asbestos NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos
-01	TUBE	87	10	C102120N	10-21	0748	1719						X
-02		87	10	C102220N	10-22	0740	1735						X
-03		81	10	C102320W	10-23	0730	1720						X
-04		87	10	C102320N	10-23	0745	1735						X
-05		83	10	C102420E	10-24	0734	1705						X
-06		87	10	C102420N	10-24	0739	1710						X
-07		81	10	C102620W	10-26	0720	1703						X
-08		83	10	C102720E	10-27	0735	1730						X
-09		270	10	C102720S	10-27	0730	1725						X
-10		83	10	C102820E	10-28	1310	1708						X
-11		81	10	C102820W	10-28	1330	1720						X
-12		87	10	C103120N	10-31	0746	1715						X
-13		270	10	C103120S	10-31	0750	1718						X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-25 (24)	1700	Dave Forse	
12/1/20 (30)	11:10	Fed Ex	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

AS

12/8/2020

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 153852

Company: FPM Remediations		Page 2 of 2	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE	
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number:	
City, State, Zip: ONEIDA NY 13421		P.O. Number: 1085-20-01	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Ambs no Ice
Sample Seals Intact: Yes ____ No 2
Sample Seals Intact: Yes ____ No 2
Total # of Samples: 20

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

Analysis Method(s)/Analyte(s)

Asbestos NIOSH 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos NIOSH 7400
-14	tube	87	10	C11Q12Q N	11-1	0752	1409						X
-15		83	10	C11Q22Q E	11-2	1415	1705						X
-16		87	10	C11Q42Q N	11-4	0748	1729						X
-17		87	10	C11Q52Q N	11-5	0740	1728						X
-18		87	10	C11Q62Q N	11-6	0908	1709						X
-19		83	10	C1116 2Q E	11-16	0806	1535						X
-20		95	10	C1116 2Q X	11-16	0800	1500						X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-30	1400	David Forse	
12/1/20	1110	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Page 30 of 96

Shipping and Receiving Documents

Pb

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Lab Number: 153847

Company: FPM Remediations		Page 1 of 2	
Contact Name: M. Gritasi		Sampler Name and Phone Number: David Forse 315 336 7580	
E-Mail Address:	Phone: 3153367721	Project Name: BNL STACK Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.gritasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature Amb °C No Fo
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 30

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-153847 Chain of Custody

Analysis Method(s)/Analyte(s)

Pb 7300 NIOSH

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb 7300 NIOSH
	FILTER	84	2	C10212ON	10-21	0748	1719						X
		84	2	C10222ON	10-22	0740	1735						
		76	2	C10232OW	10-23	0730	1720						
		84	2	C10232ON	10-23	0745	1733						
		72	2	C10242OE	10-24	0734	1705						
		84	2	C10242ON	10-24	0739	1710						
		76	2	C10262OW	10-26	0720	1703						
		72	2	C10272OE	10-27	0735	1730						
		70	2	C10272OS	10-27	0730	1725						
		72	2	C10282OE	10-28	1310	1708						
		76 DF	2	C10282OW	10-28	1330	1720						
		84	2	C10312ON	10-31	0746	1715						
		70	2	C10312OS	10-31	0750	1718						X

Instructions / Special Requirements:

DF

Date:	Time:	Samples Relinquished By:	Received By:
11-23	1900	David Forse	
12/1/20	1110	fdf	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Pb

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AG 12/1/10

Lab Number: ~~153874~~ 153847

Company: FPM Remediations		Page 2 of 2	
Contact Name: M. Gritasi		Sampler Name and Phone Number: DAVID FORSE	
E-Mail Address:	Phone:	Project Name: BNL Stack Demo	
Address: 181 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip:		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb °C no Ice
Sample Seals Intact: Yes ____ No ✓
Sample Seals Intact: Yes ____ No ✓
Total # of Samples: 2

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

Analysis Method(s)/Analyte(s)

Pb Niosh 7300

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Pb Niosh 7300
	FILTER	84	2	C11812ØN	11-1	0752	1409						X
		72	2	C11822ØE	11-2	1415	1705						↓
		84	2	C11842ØN	11-4	0748	1729						↓
		84	2	C11852ØN	11-5	0740	1728						↓
		84	2	C11862ØN	11-6	0908	1709						↓
		72	2	C11162ØE	11-16	0806	1535						↓
		96	2	C11162ØX	11-16	0800	1500						X
	NO			MORE	SAMPLES								

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-30	1400	Dave Forse	
12/1/10	11:10	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

ASB

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 153852

Company: FPM Remediations		Page 1 of 2	
Contact Name: Mike Grifasi		Sampler Name and Phone Number: DAVID FORSE 315 336 7580	
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: 191 Kenwood Ave		Project Number: 1085-20-01	
City, State, Zip: Oneida NY 13421		P.O. Number:	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address: m.grifasi@fpm-remediations.com		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Amb no + Ice
Sample Seals Intact: Yes ____ No X
Sample Seals Intact: Yes ____ No X
Total # of Samples: 20

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

550-153852 Chain of Custody

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Analysis Method(s)/Analyte(s): Asbestos Niosh 7400
-01	TUBE	87	10	C102120N	10-21	0748	1719						X
-02		87	10	C102220N	10-22	0740	1735						X
-03		81	10	C102320W	10-23	0730	1720						X
-04		87	10	C102320N	10-23	0745	1735						X
-05		83	10	C102420E	10-24	0734	1705						X
-06		87	10	C102420N	10-24	0739	1710						X
-07		81	10	C102620W	10-26	0720	1703						X
-08		83	10	C102720E	10-27	0735	1730						X
-09		270	10	C102720S	10-27	0730	1725						X
-10		83	10	C102820E	10-28	1310	1708						X
-11		81	10	C102820W	10-28	1330	1720						X
-12		87	10	C103120N	10-31	0746	1715						X
-13		270	10	C103120S	10-31	0750	1718						X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-25-20	1700	Dave Forse	
12/1/20	1110	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

AS

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www.testamericainc.com or Call 1.866.772.5227

Lab Number: 153852

Company: FAM Remediations		Page 2 of 2	
Contact Name: M. Grifasi		Sampler Name and Phone Number: DAVE FORSE	
E-Mail Address:	Phone:	Project Name: BNL STACK DEMO	
Address: 181 Kenwood Ave		Project Number:	
City, State, Zip: ONEIDA NY 13421		P.O. Number: 1085-20-01	Data Package:
Send Report To:	Phone:	Hardcopy Results: (Y) N	Standard Level II:
E-Mail Address:		E-Mail Results: (Y) N	Level III:
Send Invoice To:	Phone:	EDD: (Y) N	Level IV:
E-Mail Address:			

Sample Receipt

Temperature: Ambs no Ice
Sample Seals Intact: Yes ____ No 2
Sample Seals Intact: Yes ____ No 2
Total # of Samples: 20

Turn Around Request

____ Same Day ____ 3 Business Days
____ 1 Business Day ____ 4 Business Days
____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

Analysis Method(s)/Analyte(s)

Asbestos Niosh 7400

Sample Information

Lab # (Internal Use Only)	Media Type: Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	Asbestos Niosh 7400
-14	tube	87	10	C11@12@N	11-1	0752	1409						X
-15		83	10	C11@22@E	11-2	1415	1705						X
-16		87	10	C11@42@N	11-4	0748	1729						X
-17		87	10	C11@52@N	11-5	0740	1728						X
-18		87	10	C11@62@N	11-6	0908	1709						X
-19		83	10	C1116 2@E	11-16	0806	1535						X
-20		95	10	C1116 2@X	11-16	0800	1500						X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11-30	1400	David Forse	
12-1-20	1110	FedEx	TA-PHX

All services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-40673-1

Login Number: 40673
List Number: 1
Creator: Vania, Ivan H

List Source: Eurofins TestAmerica, St. Louis

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

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP201024813
Project #: 1085-20-01
Receipt Date: 18-Dec-2020
Analysis Date: 22-Dec-2020
Report Date: 22-Dec-2020

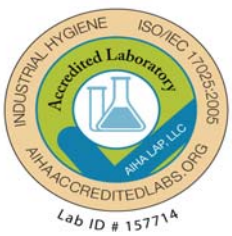
BNL STACK DEMO

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C111220S	1227.5	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C111320S	1387.5	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C111320W	1382.5	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C111420S	1332.5	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C111420E	1365	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C112020N	1282.5	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director



This report relates only to the samples submitted. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced except in full without written approval by J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for results reported in micrograms per cubic meter µg/m3 which is dependent on volumes provided by non-laboratory personnel. Samples exceeding the method recommended dust loading of 2 mg/filter were fractionated to determine the total respirable crystalline silica mass and concentration.

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP201024813
Project #: 1085-20-01
Receipt Date: 18-Dec-2020
Analysis Date: 22-Dec-2020
Report Date: 22-Dec-2020

BNL STACK DEMO

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C112120E	1342.5	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C112120S	1307.5	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C112420E	1227.5	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C112420S	862.5	α-Quartz	< 5.0	< 5.8
		Cristobalite	< 5.0	< 5.8
		Tridymite	< 20	< 23
		Respirable Crystalline Silica	**< 5.0**	**< 5.8**
C112420X	975	α-Quartz	< 5.0	< 5.1
		Cristobalite	< 5.0	< 5.1
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.1**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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eurofins | Environment Testing TestAmerica

24813

Lab Number:

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www.testamericainc.com or Call 1.866.772.5227

Company: FPM Remediations
Page 1 of 1
Contact Name: Mike Grifasi
Sampler Name and Phone Number: DAVE FORSE
Mail Address: Phone:
Project Name: BNL STACK DEMO
Address: 181 Kenwood Ave
Project Number: 1085-20-01
City, State, Zip: Oneida NY 13421
P.O. Number:
Data Package:
Send Report To: Phone: 315 336 7721
Hardcopy Results: (Y) N
Standard Level II:
Mail Address: M.grifasi@fpm-remediations.com
E-Mail Results: (Y) N
Level III:
Send Invoice To: Phone:
EDD: (Y) N
Level IV:
Mail Address:

Sample Receipt

Temperature _____ °C
Sample Seals Intact: Yes _____ No _____
Sample Seals Intact: Yes _____ No _____
Total # of Samples: _____

Turn Around Request

_____ Same Day _____ 3 Business Days
_____ 1 Business Day _____ 4 Business Days
_____ 2 Business Days X 5 Business Days (Standard)

Rushes are subject to availability. (Surcharges apply)

Analysis Method(s)/Analyte(s)

NIOSH 7500 (Si)

Sample Information

Lab # (Internal Use Only)	Filter, Passive Badge, Tube or Wipe	Pump ID Number	Flow Rate (Liters/minute)	Sample Identification Name/Number	Collection Date	Start Time	Stop Time	Total Minutes Sampled (Badge Only)	Total Volume (Liters)	Area Wiped in cm2	Sampling Temperature (°C)	Sampling Pressure (mmHg)	
	FILTER	70	2.5	C11122QS	11-12	0928	1739	491	1227.5				1
		70		C11132QS	11-13	0805	1720	555	1387.5				1
		76		C11132QW	11-13	0812	1725	553	1382.5				1
		70		C11142QS	11-14	0828	1721	533	1332.5				1
		72		C11142QE	11-14	0808	1714	546	1365				1
		84		C11202QN	11-20	0814	1647	513	1282.5				1
		72		C11212QE	11-21	0745	1642	537	1342.5				1
		70		C11212QS	11-21	0808	1651	523	1307.5				1
		72		C11242QE	11-24	0758	1409	491	1227.5				1
		70		C11242QS	11-24	0822	1407	345	862.5				1
		90	2.5	C11242QX	11-24	0800	1430	390	975				1

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12-15	1730	Dave Forse	12/16/2020 10:00 AM

Services are performed subject to the Terms & Conditions on the reverse side.

TAL-8225 (0414)

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025191
Project #: 1085-20-01
Receipt Date: 19-Jan-2021
Analysis Date: 22-Jan-2021
Report Date: 25-Jan-2021

Brookhaven Stack Demolition

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C010421S	**862.5**	α-Quartz	< 5.0	< 5.8
		Cristobalite	< 5.0	< 5.8
		Tridymite	< 20	< 23
		Respirable Crystalline Silica	**< 5.0**	**< 5.8**
C010521S	**1415**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C010621S	**1405**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C010721S	**1545**	α-Quartz	< 5.0	< 3.2
		Cristobalite	< 5.0	< 3.2
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.2**
C010821S	**1357.5**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C010421X	**1500**	α-Quartz	< 5.0	< 3.3
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.3**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025191
Project #: 1085-20-01
Receipt Date: 19-Jan-2021
Analysis Date: 22-Jan-2021
Report Date: 25-Jan-2021

Brookhaven Stack Demolition

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C010921S	**1132.5**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C011021S	**1205**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C011121E	**1180**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C011221S	**1387.5**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C011221X	**1500**	α-Quartz	< 5.0	< 3.3
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.3**
C011321N	**1460**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method recommended dust loading of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025191
Project #: 1085-20-01
Receipt Date: 19-Jan-2021
Analysis Date: 22-Jan-2021
Report Date: 25-Jan-2021

Brookhaven Stack Demolition

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C011421S	**1400**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C011421E	**1445**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C011621E	**1235**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C011721E	**1432**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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☐ Open Lab Fee

25191

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell
Reports - Email Address: m.grifasi@fpm-remediations.com, d.forse@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) o *Drop Mount* o Filtration	○ **EPA 100.2** Drinking Water o >10 µm fibers o ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: o Yes o No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 16 **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dal Forse	**Date:** 1-18-21	**Time:** 1400
Received By:		**Date:** 1/19/21	**Time:** 12:08pm
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are In Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C010421S	South - Air	862.5
C010521S	South - Air	1415
C010621S	South - Air	1405
C010721S	South - Air	1545
C010821S	South - Air	1357.5
C010421X	Site - Air	1500
C010921S	South - Air	1132.5
C011021S	South - Air	1205
C011121E	East - Air	1180
C011221S	South - Air	1387.5
C011221X	Site - Air	1500
C011321N	North - Air	1460
C011421S	South - Air	1400
C011421E	East - Air	1445
C011621E	East- Air	1235
C011721E	East- Air	1432

Comments/Special Instructions:

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Eurofins J3 Resources, Inc. ♦ 3113 Red Bluff Road ♦ Pasadena, Texas 77503 ♦ tel: 713-290-0223 ♦ fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025824
Project #: 1085-20-01
Receipt Date: 22-Feb-2021
Analysis Date: 26-Feb-2021
Report Date: 26-Feb-2021

Brookhaven Stack Demolition (2/20)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C011821E	**1327.5**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C011921E	**1442.5**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C012021E	**1427.5**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C012021S	**1390**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C012121E	**1512.5**	α-Quartz	< 5.0	< 3.3
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.3**
C012121N	**1507.5**	α-Quartz	< 5.0	< 3.3
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.3**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025824
Project #: 1085-20-01
Receipt Date: 22-Feb-2021
Analysis Date: 26-Feb-2021
Report Date: 26-Feb-2021

Brookhaven Stack Demolition (2/20)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C012221E	1560	α-Quartz	< 5.0	< 3.2
		Cristobalite	< 5.0	< 3.2
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.2**
C012321E	1005	α-Quartz	6.0	6.0
		Cristobalite	< 5.0	< 5
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**6.0**	**6.0**
C012321S	980	α-Quartz	< 5.0	< 5.1
		Cristobalite	< 5.0	< 5.1
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 5.1**
C012521E	1415	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C012521S	1390	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C012621W	1367.5	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211025824
Project #: 1085-20-01
Receipt Date: 22-Feb-2021
Analysis Date: 26-Feb-2021
Report Date: 26-Feb-2021

Brookhaven Stack Demolition (2/20)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C012821S	**1107.5**	α-Quartz	< 5.0	< 4.5
		Cristobalite	< 5.0	< 4.5
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.5**
C013021E	**1040**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C013021S	**1022.5**	α-Quartz	< 5.0	< 4.9
		Cristobalite	< 5.0	< 4.9
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 4.9**
C011821X	**1505**	α-Quartz	7.5	5.0
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**7.5**	**5.0**
C012521X	**1510**	α-Quartz	< 5.0	< 3.3
		Cristobalite	< 5.0	< 3.3
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.3**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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25824

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric

☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**

○ **NIOSH 0500** – Total Particulates
○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 17/11 **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dan Ours	**Date:** 2-20	**Time:** 1600
Received By:		**Date:** 2/22/21	**Time:** 10:30
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C011821E	CAMP East -air	1327.5
C011921E	CAMP East -air	1442.5
C012021E	CAMP East - air	1427.5
C012021S	CAMP South - air	1390
C012121E	CAMP East - air	1512.5
C012121N	CAMP North - air	1507.5
C012221E	CAMP East - air	1560
C012321E	CAMP East - air	1005
C012321S	CAMP South - air	980
C012521E	CAMP East - air	1415
C012521S	CAMP South - air	1390
C012621W	CAMP West - air	1367.5
C012821S	CAMP South - air	1107.5
C013021E	CAMP East - air	1040
C013021S	CAMP South - air	1022.5
C011821X	CAMP Air	1505
C012521X	CAMP Air	1510

Comments/Special Instructions:

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Eurofins J3 Resources, Inc. ♦ 3113 Red Bluff Road ♦ Pasadena, Texas 77503 ♦ tel: 713-290-0223 ♦ fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026163
Project #: 1085-20-01
Receipt Date: 11-Mar-2021
Analysis Date: 12-Mar-2021
Report Date: 15-Mar-2021

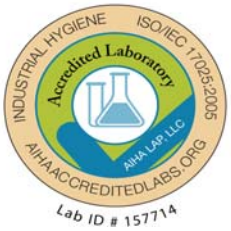
Brookhaven Stack Demolition (3/9)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C020621E	**1380**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C020421S	**1193**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C020421E	**1213**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C021021E	**1448**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C021021S	**1313**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C021121S	**1310**	α-Quartz	VOID	VOID
		Cristobalite	VOID	VOID
		Tridymite	VOID	VOID
		Respirable Crystalline Silica	**VOID**	**VOID**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director



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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026163
Project #: 1085-20-01
Receipt Date: 11-Mar-2021
Analysis Date: 12-Mar-2021
Report Date: 15-Mar-2021

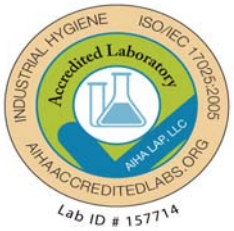
Brookhaven Stack Demolition (3/9)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C021221S	1410	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C021321S	735	α-Quartz	< 5.0	< 6.8
		Cristobalite	< 5.0	< 6.8
		Tridymite	< 20	< 27
		Respirable Crystalline Silica	**< 5.0**	**< 6.8**
C021321W	725	α-Quartz	< 5.0	< 6.9
		Cristobalite	< 5.0	< 6.9
		Tridymite	< 20	< 28
		Respirable Crystalline Silica	**< 5.0**	**< 6.9**
C021321X	1050	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C021621E	975	α-Quartz	< 5.0	< 5.1
		Cristobalite	< 5.0	< 5.1
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.1**
C021621N	960	α-Quartz	< 5.0	< 5.2
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director



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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026163
Project #: 1085-20-01
Receipt Date: 11-Mar-2021
Analysis Date: 12-Mar-2021
Report Date: 15-Mar-2021

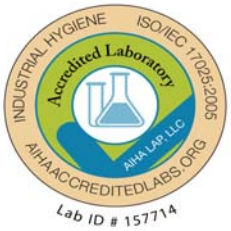
Brookhaven Stack Demolition (3/9)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C021721S	1423	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C021721X	1050	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C021821S	970	α-Quartz	< 5.0	< 5.2
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.2**
C021821W	993	α-Quartz	< 5.0	< 5
		Cristobalite	< 5.0	< 5
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 5**
C021921W	1320	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C021921S	1360	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director



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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026163
Project #: 1085-20-01
Receipt Date: 11-Mar-2021
Analysis Date: 12-Mar-2021
Report Date: 15-Mar-2021

Brookhaven Stack Demolition (3/9)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C022021E	1267	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method recommended dust loading of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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☐ Open Lab Fee

24163

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 19 N.T. **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dave Forse	**Date:** 3-9-21	**Time:** 1630
Received By:		**Date:** 3/9/2021	**Time:** 9:58a
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (I.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C020621E	East -Air	1380
C020421S	South-Air	1193
C020421E	East-Air	1213
C021021E	East -Air	1448
C021021S	South-Air	1313
C021121S	South-Air	1310
C021221S	South-Air	1410
C021321S	South-Air	735
C021321W	West-Air	725
C021321X	Site-Air	1050
C021621E	East-Air	975
C021621N	North-Air	960
C021721S	South -Air	1423
C021721X	Site-air	1050
C021821S	South- Air	970
C021821W	West-Air	993
C021921W	West- Air	1320
C021921S	South-Air	1360
C022021E	East-Air	1267

Comments/Special Instructions:

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026535
Project #: 1085-20-01
Receipt Date: 31-Mar-2021
Analysis Date: 2-Apr-2021
Report Date: 6-Apr-2021

Brookhaven Stack Demolition (3/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C022221N	**1165**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C022321E	**1433**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C022321N	**1418**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C022421E	**1390**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C022421N	**1388**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C022421X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026535
Project #: 1085-20-01
Receipt Date: 31-Mar-2021
Analysis Date: 2-Apr-2021
Report Date: 6-Apr-2021

Brookhaven Stack Demolition (3/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C030421E	**1108**	α-Quartz	< 5.0	< 4.5
		Cristobalite	< 5.0	< 4.5
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.5**
C030421S	**1078**	α-Quartz	< 5.0	< 4.6
		Cristobalite	< 5.0	< 4.6
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.6**
C030521E	**1150**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C030321E	**1245**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C030621S	**965**	α-Quartz	< 5.0	< 5.2
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.2**
C030621E	**998**	α-Quartz	< 5.0	< 5
		Cristobalite	< 5.0	< 5
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026535
Project #: 1085-20-01
Receipt Date: 31-Mar-2021
Analysis Date: 2-Apr-2021
Report Date: 6-Apr-2021

Brookhaven Stack Demolition (3/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C030821E	**1355**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C030821S	**1325**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C030921E	**1273**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C030921N	**1263**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C031021N	**1028**	α-Quartz	< 5.0	< 4.9
		Cristobalite	< 5.0	< 4.9
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.9**
C031021W	**1023**	α-Quartz	< 5.0	< 4.9
		Cristobalite	< 5.0	< 4.9
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 4.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
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j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026535
Project #: 1085-20-01
Receipt Date: 31-Mar-2021
Analysis Date: 2-Apr-2021
Report Date: 6-Apr-2021

Brookhaven Stack Demolition (3/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C031021X	**1125**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C031121N	**1033**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C031221E	**1020**	α-Quartz	< 5.0	< 4.9
		Cristobalite	< 5.0	< 4.9
		Tridymite	< 20	< 20
		Respirable Crystalline Silica	**< 5.0**	**< 4.9**
C031321N	**1120**	α-Quartz	< 5.0	< 4.5
		Cristobalite	< 5.0	< 4.5
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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☐ Open Lab Fee

240535

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) o Drop Mount o Filtration	○ **EPA 100.2** Drinking Water o >10 µm fibers o ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: o Yes o No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**
○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 22/n.t. **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dave Forse	**Date:** 3-29-21	**Time:** 1400
Received By:		**Date:** 3/31/21	**Time:** 10:30
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C022221N	North - Air	1165
C022321E	East - Air	1433
C022321N	North - Air	1418
C022421E	East - Air	1390
C022421N	North - Air	1388
C022421X	Site- Air	1275
C030421E	East - Air	1108
C030421S	South - Air	1078
C030521E	East- Air	1150
C030321E	East - Air	1245
C030621S	South- Air	965
C030621E	East- Air	998
C030821E	East- Air	1355
C030821S	South - Air	1325
C030921E	East - Air	1273
C030921N	North- Air	1263
C031021N	North- Air	1028
C031021W	West- Air	1023
C031021X	Site -Air	1125
C031121N	North- Air	1033
C031221E	East - Air	1020
C031321N	East - Air	1120

Comments/Special Instructions:

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026708
Project #: 1085-20-01
Receipt Date: 8-Apr-2021
Analysis Date: 13-Apr-2021
Report Date: 13-Apr-2021

Brookhaven Stack Demolition (4/6)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
CO31521S	**1390**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C031521W	**1388**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C031621N	**1338**	α-Quartz	17	13
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**17**	**13**
C031621W	**1345**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C031721N	**1263**	α-Quartz	17	14
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**17**	**14**
C031721W	**1235**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026708
Project #: 1085-20-01
Receipt Date: 8-Apr-2021
Analysis Date: 13-Apr-2021
Report Date: 13-Apr-2021

Brookhaven Stack Demolition (4/6)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C031821W	**1440**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C031921S	**1135**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C031921X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C032021E	**1038**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C032021S	**1035**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C032221E	**1225**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026708
Project #: 1085-20-01
Receipt Date: 8-Apr-2021
Analysis Date: 13-Apr-2021
Report Date: 13-Apr-2021

Brookhaven Stack Demolition (4/6)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C032321N	**1362**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C032321W	**1288**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C032421W	**1313**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C032521N	**1263**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C032521S	**1213**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C032521N	**1263**	α-Quartz	N/A	N/A
		Cristobalite	N/A	N/A
		Tridymite	N/A	N/A
		Respirable Crystalline Silica	**Not Submitted**	**Not Submitted**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026708
Project #: 1085-20-01
Receipt Date: 8-Apr-2021
Analysis Date: 13-Apr-2021
Report Date: 13-Apr-2021

Brookhaven Stack Demolition (4/6)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C032621N	**1250**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C032721N	**1125**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C032721X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Duane Salinas

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

240708

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ *Drop Mount* ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**
○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 21/n.t- | Positive Stop: ☐ YES ☐ NO

Signatures

Relinquished By:	Dal Forse	Date: 4-6-21	Time: 17:30
Received By:	MV	Date: 4/7/21	Time: 4:00
Relinquished By:		Date:	Time:
Received By:		Date:	Time:

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
CO31521S	South-Air	1390
C031521W	West- Air	1388
C031621N	North-Air	1338
C031621W	West-Air	1345
C031721N	North-Air	1263
C031721W	West-Air	1235
C031821W	West-Air	1440
C031921S	South-Air	1135
C031921X	Site-Air	1200
C032021E	East-Air	1038
C032021S	South-Air	1035
C032221E	East-Air	1225
C032321N	North-Air	1362
C032321W	West-Air	1288
C032421W	West-Air	1313
C032521N	North-Air	1263
C032521S	South-Air	1213
~~C032521N~~	~~North-Air~~	~~1263~~ Duplicate Per D.F./n.t.
C032621N	North-Air	1250
C032721N	North-Air	1125
C032721X	Site-Air	1200

Comments/Special Instructions:

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026903
Project #: 1085-20-01
Receipt Date: 19-Apr-2021
Analysis Date: 22-Apr-2021
Report Date: 23-Apr-2021

Brookhaven Stack Demolition (4/15)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C032921E	**1255**	α-Quartz	< 5.0	< 4.0
		Cristobalite	< 5.0	< 4.0
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.0**
C033021N	**1198**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C033121N	**1210**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C040121E	**1235**	α-Quartz	< 5.0	< 4.0
		Cristobalite	< 5.0	< 4.0
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.0**
C040121S	**1203**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C040221E	**1378**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211026903
Project #: 1085-20-01
Receipt Date: 19-Apr-2021
Analysis Date: 22-Apr-2021
Report Date: 23-Apr-2021

Brookhaven Stack Demolition (4/15)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C040221S	**1358**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C040321E	**1183**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C040321S	**1178**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C040321X	**1088**	α-Quartz	< 5.0	< 4.6
		Cristobalite	< 5.0	< 4.6
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.6**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

26903

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW646 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 10/mm

Positive Stop: ☐ YES ☐ NO

Signatures

Relinquished By:	Dave Forse	**Date:** 4-15	**Time:** 1600
Received By:		**Date:** 4/19/21	**Time:** 9:58
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are In Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C032921E	East-Air	1255
C033021N	North-Air	1198
C033121N	North-Air	1210
C040121E	East-Air	1235
C040121S	South-Air	1203
C040221E	East-Air	1378
C040221S	South-Air	1358
C040321E	East-Air	1183
C040321S	South-Air	1178
C040321X	Site-Air	1088

Comments/Special Instructions:

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027017
Project #: 1085-20-01
Receipt Date: 26-Apr-2021
Analysis Date: 28-Apr-2021
Report Date: 28-Apr-2021

Brookhaven Stack Demolition (4/22)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C040521E	**1365**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C040521S	**1345**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C040621E	**1410**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C040621S	**1400**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C040721E	**1425**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C040721S	**1400**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027017
Project #: 1085-20-01
Receipt Date: 26-Apr-2021
Analysis Date: 28-Apr-2021
Report Date: 28-Apr-2021

Brookhaven Stack Demolition (4/22)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C040821E	**1388**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C040821S	**1350**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C040821X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C040921N	**1320**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C040921W	**1303**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C041021E	**958**	α-Quartz	< 5.0	< 5.2
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027017
Project #: 1085-20-01
Receipt Date: 26-Apr-2021
Analysis Date: 28-Apr-2021
Report Date: 28-Apr-2021

Brookhaven Stack Demolition (4/22)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C041021N	**950**	α-Quartz	< 5.0	< 5.3
		Cristobalite	< 5.0	< 5.3
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.3**
C041221W	**1228**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C041321S	**1223**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C041421N	**1358**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C041521N	**955**	α-Quartz	< 5.0	< 5.2
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**< 5.0**	**< 5.2**
C041521W	**925**	α-Quartz	< 5.0	< 5.4
		Cristobalite	< 5.0	< 5.4
		Tridymite	< 20	< 22
		Respirable Crystalline Silica	**< 5.0**	**< 5.4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027017
Project #: 1085-20-01
Receipt Date: 26-Apr-2021
Analysis Date: 28-Apr-2021
Report Date: 28-Apr-2021

Brookhaven Stack Demolition (4/22)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C041621E	**1165**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C041621S	**1123**	α-Quartz	< 5.0	< 4.5
		Cristobalite	< 5.0	< 4.5
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.5**
C041621X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C041721E	**1213**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C041721S	**1186**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director



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Revision #v7/MF
Revision Date: 3/09/2020

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27017

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 23/N.T. | Positive Stop: ☐ YES ☐ NO

Signatures

Relinquished By:	Dal Forse	**Date:** 4-22	**Time:** 17:10
Received By:		**Date:** 4/23/2021	**Time:** 1307
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C040521E	East-Air	1365
C040521S	South-Air	1345
C040621E	East-Air	1410
C040621S	South-Air	1400
C040721E	East-Air	1425
C040721S	South-Air	1400
C040821E	East-Air	1388
C040821S	South-Air	1350
C040821X	Site-Air	1275
C040921N	North-Air	1320
C040921W	West-Air	1303
C041021E	East-Air	958
C041021N	North-Air	950
C041221W	West-Air	1228
C041321S	South-Air	1223
C041421N	North-Air	1358
C041521N	North-Air	955
C041521W	West-Air	925
C041621E	East-Air	1165
C041621S	South-Air	1123
C041621X	Site-Air	1200
C041721E	East-Air	1213
C041721S	South-Air	1186

Comments/Special Instructions:

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J3 Resources, Inc.
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j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027322
Project #: 1085-20-01
Receipt Date: 10-May-2021
Analysis Date: 12-May-2021
Report Date: 12-May-2021

Brookhaven Stack Demolition (5/5)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C041921S	**1040**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C041921W	**1098**	α-Quartz	< 5.0	< 4.6
		Cristobalite	< 5.0	< 4.6
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.6**
C042021N	**1365**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C042121N	**915**	α-Quartz	< 5.0	< 5.5
		Cristobalite	< 5.0	< 5.5
		Tridymite	< 20	< 22
		Respirable Crystalline Silica	**< 5.0**	**< 5.5**
C042221E	**1295**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C042221X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027322
Project #: 1085-20-01
Receipt Date: 10-May-2021
Analysis Date: 12-May-2021
Report Date: 12-May-2021

Brookhaven Stack Demolition (5/5)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C042321E	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C042421E	**1338**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C042421N	**1325**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C042621E	**1218**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C042721N	**1470**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C042821N	**1563**	α-Quartz	< 5.0	< 3.2
		Cristobalite	< 5.0	< 3.2
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027322
Project #: 1085-20-01
Receipt Date: 10-May-2021
Analysis Date: 12-May-2021
Report Date: 12-May-2021

Brookhaven Stack Demolition (5/5)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C042821S	**1553**	α-Quartz	< 5.0	< 3.2
		Cristobalite	< 5.0	< 3.2
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.2**
C042921N	**1188**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C042921X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

27322

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) o *Drop Mount* o Filtration	○ **EPA 100.2** Drinking Water o >10 µm fibers o ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** *Carpet - EPA* ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric

☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**

○ **NIOSH 0500** – Total Particulates
○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 15/mm

Positive Stop: ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dan Forse	**Date:** 5-5	**Time:** 1700
Received By:		**Date:** 5/6/21	**Time:** 3:14 pm
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C041921S	AIR-SOUTH	1040
C041921W	AIR-WEST	1098
C042021N	AIR-NORTH	1365
C042121N	AIR-NORTH	915
C042221E	AIR-EAST	1295
C042221X	AIR-SITE	1200
C042321E	AIR-EAST	1275
C042421E	AIR-EAST	1338
C042421N	AIR-NORTH	1325
C042621E	AIR-EAST	1218
C042721N	AIR-NORTH	1470
C042821N	AIR-NORTH	1563
C042821S	AIR-SOUTH	1553
C022921N	AIR-NORTH	1188
C042921X	AIR-SITE	1200

Comments/Special Instructions:

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Phone: (713) 290-0223 – Fax: (832) 831-5669
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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027735
Project #: 1085-20-01
Receipt Date: 4-Jun-2021
Analysis Date: 8-Jun-2021
Report Date: 9-Jun-2021

Brookhaven Stack Demolition (6/2)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C050621E	**1180**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C050621S	**1165**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C050721E	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C050821N	**553**	α-Quartz	< 5.0	< 9
		Cristobalite	< 5.0	< 9
		Tridymite	< 20	< 36
		Respirable Crystalline Silica	**< 5.0**	**< 9**
C050821W	**508**	α-Quartz	< 5.0	< 9.8
		Cristobalite	< 5.0	< 9.8
		Tridymite	< 20	< 39
		Respirable Crystalline Silica	**< 5.0**	**< 9.8**
C051021E	**1368**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027735
Project #: 1085-20-01
Receipt Date: 4-Jun-2021
Analysis Date: 8-Jun-2021
Report Date: 9-Jun-2021

Brookhaven Stack Demolition (6/2)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C051021S	1360	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C051121E	1298	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C051121X	1275	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C051321E	1270	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C051321N	1260	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C051321S	1248	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027735
Project #: 1085-20-01
Receipt Date: 4-Jun-2021
Analysis Date: 8-Jun-2021
Report Date: 9-Jun-2021

Brookhaven Stack Demolition (6/2)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C051421E	**1243**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C051421N	**1240**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C051421S	**1230**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C051521N	**1304**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C051521S	**1307**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C051721N	**1385**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211027735
Project #: 1085-20-01
Receipt Date: 4-Jun-2021
Analysis Date: 8-Jun-2021
Report Date: 9-Jun-2021

Brookhaven Stack Demolition (6/2)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C051721E	**1393**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C051821E	**1300**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C051821N	**1293**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C051821X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

27735

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☑ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**
○ **NIOSH 0500** – Total Particulates
○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 22 n.t. **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	David Forse	**Date:** 6-7	**Time:** 16:30
Received By:		**Date:** 6/8/2021	**Time:** 1530
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C050621E	East-Air	1180
C050621S	South- Air	1165
C050721E	East-Air	1200
C050821N	North-Air	553
C050821W	West-Air	508
C051021E	East-Air	1368
C051021S	South-Air	1360
C051121E	East-Air	1298
C051121X	Site-Air	1275
C051321E	East-Air	1270
C051321N	North-Air	1260
C051321S	South-Air	1248
C051421E	East-Air	1243
C051421N	North-Air	1240
C051421S	South-Air	1230
C051521N	North-Air	1304
C051521S	South -Air	1307
C051721N	North-Air	1385
C051721E	East-Air	1393
C051821E	East-Air	1300
C051821N	North-Air	1293
C051821X	Site-Air	1275

Comments/Special Instructions:

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Eurofins J3 Resources, Inc. • 3113 Red Bluff Road • Pasadena, Texas 77503 • tel: 713-290-0223 • fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028039
Project #: 1085-20-01
Receipt Date: 21-Jun-2021
Analysis Date: 23-Jun-2021
Report Date: 24-Jun-2021

Brookhaven Stack Demolition (6/17)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C051921S	**1190**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C052021N	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C052121N	**1215**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C052521N	**1243**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C052621N	**1260**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C052721E	**848**	α-Quartz	< 5.0	< 5.9
		Cristobalite	< 5.0	< 5.9
		Tridymite	< 20	< 24
		Respirable Crystalline Silica	**< 5.0**	**< 5.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028039
Project #: 1085-20-01
Receipt Date: 21-Jun-2021
Analysis Date: 23-Jun-2021
Report Date: 24-Jun-2021

Brookhaven Stack Demolition (6/17)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C060321N	**1273**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C060321X	**1200**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C060421E	**1143**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C060421N	**1128**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

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280 39

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 10/mg

Positive Stop: ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Paul Forse	**Date:** 6-17	**Time:** 1745
Received By:	M. Guerra	**Date:** 6/21/21	**Time:** 9:49
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C051921S	South-Air	1190
C052021N	North-Air	1200
C052121N	North-Air	1215
C052521N	North-Air	1243
C052621N	North-Air	1260
C052721E	East-Air	848
C060321N	North-Air	1273
C060321X	Site-Air	1200
C060421E	East-Air	1143
C060421N	North-Air	1128

Comments/Special Instructions:

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Eurofins J3 Resources, Inc. ♦ 3113 Red Bluff Road ♦Pasadena, Texas 77503 ♦ tel: 713-290-0223 ♦ fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028073
Project #: 1085-20-01
Receipt Date: 23-Jun-2021
Analysis Date: 23-Jun-2021
Report Date: 24-Jun-2021

Brookhaven Stack Demolition (6/21)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
L1061721	**1388**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
L2061721	**1388**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
L3061721	**900**	α-Quartz	33	37
		Cristobalite	< 5.0	< 5.6
		Tridymite	< 20	< 22
		Respirable Crystalline Silica	**33**	**37**
L1061821	**963**	α-Quartz	66	69
		Cristobalite	< 5.0	< 5.2
		Tridymite	< 20	< 21
		Respirable Crystalline Silica	**66**	**69**
L1062121	**1200**	α-Quartz	19	16
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**19**	**16**
L2062121	**1200**	α-Quartz	17	14
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**17**	**14**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

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Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☑	2 Day ☐	3 Day ☐	5 Day ☐

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ Drop Mount ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 6/mg

Positive Stop: ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Paul Forse	**Date:** 6-21	**Time:** 1745
Received By:	M. Guerra	**Date:** 6/23/21	**Time:** 11:40A
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

IH CHAIN OF CUSTODY

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
L1061721	Labor-Air	1388
L2061721	Labor-Air	1388
L3061721	Labor-Air	900
L1061821	Labor-Air	963
L1062121	Labor-Air	1200
L2062121	Labor-Air	1200

Comments/Special Instructions: One day turnaround analysis requested

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C060721N	**1068**	α-Quartz	< 5.0	< 4.7
		Cristobalite	< 5.0	< 4.7
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.7**
C060721W	**1068**	α-Quartz	< 5.0	< 4.7
		Cristobalite	< 5.0	< 4.7
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.7**
C060821N	**1185**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C060821W	**1125**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C061521E	**1433**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C061521N	**1428**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
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181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C061621E	**1313**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C061621N	**1293**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C061721E	**1403**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C061721S	**1353**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C061721X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C061821E	**1158**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C061821N	**1153**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C062121N	**1270**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062221E	**1225**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062221S	**1205**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062321E	**1465**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C062321S	**1450**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C062421N	**1243**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C062421W	**1233**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062521E	**1293**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062521S	**1295**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062521X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

78220

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ *Drop Mount* ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 23 h.t. **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dan Forse	**Date:** 6-29-21	**Time:** 17:30
Received By:		**Date:** 7/1/21	**Time:** 10:09am
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

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Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C060721N	North-Air	1068
C060721W	West-Air	1068
C060821N	North-Air	1185
C060821W	West-Air	1125
C061521E	East-Air	1433
C061521N	North-Air	1428
C061621E	East-Air	1313
C061621N	North-Air	1293
C061721E	East-Air	1403
C061721S	South-Air	1353
C061721X	Site-Air	1275
C061821E	East-Air	1158
C061821N	North-Air	1153
C062121N	North-Air	1270
C062221E	East-Air	1225
C062221S	South-Air	1205
C062321E	East-Air	1465
C062321S	South-Air	1450
C062421N	North-Air	1243
C062421W	West-Air	1233
C062521E	East-Air	1293
C062521S	South-Air	1295
C062521X	Site-Air	1275

Comments/Special Instructions:

Eurofins J3 Resources, Inc. • 6110 West 34th Street • Houston, Texas 77092 • tel: 713-290-0221 • fax: 713-290-0248
Eurofins J3 Resources, Inc. • 3113 Red Bluff Road •Pasadena, Texas 77503 • tel: 713-290-0223 • fax: 713-290-0248

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181 Kenwood Avenue
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J3 Order #: JP211028220
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Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C060721N	**1068**	α-Quartz	< 5.0	< 4.7
		Cristobalite	< 5.0	< 4.7
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.7**
C060721W	**1068**	α-Quartz	< 5.0	< 4.7
		Cristobalite	< 5.0	< 4.7
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.7**
C060821N	**1185**	α-Quartz	< 5.0	< 4.2
		Cristobalite	< 5.0	< 4.2
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.2**
C060821W	**1125**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C061521E	**1433**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C061521N	**1428**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

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Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
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		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C061621N	**1293**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C061721E	**1403**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C061721S	**1353**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C061721X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C061821E	**1158**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
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Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
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N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C061821N	**1153**	α-Quartz	< 5.0	< 4.3
		Cristobalite	< 5.0	< 4.3
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.3**
C062121N	**1270**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062221E	**1225**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062221S	**1205**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062321E	**1465**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C062321S	**1450**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028220
Project #: 1085-20-01
Receipt Date: 1-Jul-2021
Analysis Date: 7-Jul-2021
Report Date: 7-Jul-2021

Brookhaven Stack Demolition (6/29)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C062421N	**1243**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C062421W	**1233**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C062521E	**1293**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062521S	**1295**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C062521X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Kennetch Castro

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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78220

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) ○ *Drop Mount* ○ Filtration	○ **EPA 100.2** Drinking Water ○ >10 µm fibers ○ ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142** ○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 23 h.t. **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Dan Forse	**Date:** 6-29-21	**Time:** 17:30
Received By:		**Date:** 7/1/21	**Time:** 10:09am
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C060721N	North-Air	1068
C060721W	West-Air	1068
C060821N	North-Air	1185
C060821W	West-Air	1125
C061521E	East-Air	1433
C061521N	North-Air	1428
C061621E	East-Air	1313
C061621N	North-Air	1293
C061721E	East-Air	1403
C061721S	South-Air	1353
C061721X	Site-Air	1275
C061821E	East-Air	1158
C061821N	North-Air	1153
C062121N	North-Air	1270
C062221E	East-Air	1225
C062221S	South-Air	1205
C062321E	East-Air	1465
C062321S	South-Air	1450
C062421N	North-Air	1243
C062421W	West-Air	1233
C062521E	East-Air	1293
C062521S	South-Air	1295
C062521X	Site-Air	1275

Comments/Special Instructions:

Eurofins J3 Resources, Inc. • 6110 West 34th Street • Houston, Texas 77092 • tel: 713-290-0221 • fax: 713-290-0248
Eurofins J3 Resources, Inc. • 3113 Red Bluff Road •Pasadena, Texas 77503 • tel: 713-290-0223 • fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028970
Project #: 1085-20-01
Receipt Date: 11-Aug-2021
Analysis Date: 17-Aug-2021
Report Date: 17-Aug-2021

Brookhaven Stack Demolition (8/10)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C071221S	**1360**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C071221W	**1333**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C071321N	**1318**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C071321E	**1330**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C071421N	**1233**	α-Quartz	< 5.0	< 4.1
		Cristobalite	< 5.0	< 4.1
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4.1**
C071521N	**1315**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028970
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Receipt Date: 11-Aug-2021
Analysis Date: 17-Aug-2021
Report Date: 17-Aug-2021

Brookhaven Stack Demolition (8/10)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C071521S	**1303**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C071621N	**1323**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C071621X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C071921S	**1258**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C071921E	**1285**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C072021E	**1360**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director



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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028970
Project #: 1085-20-01
Receipt Date: 11-Aug-2021
Analysis Date: 17-Aug-2021
Report Date: 17-Aug-2021

Brookhaven Stack Demolition (8/10)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C072021N	**1375**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C072121E	**1143**	α-Quartz	< 5.0	< 4.4
		Cristobalite	< 5.0	< 4.4
		Tridymite	< 20	< 17
		Respirable Crystalline Silica	**< 5.0**	**< 4.4**
C072121S	**1120**	α-Quartz	< 5.0	< 4.5
		Cristobalite	< 5.0	< 4.5
		Tridymite	< 20	< 18
		Respirable Crystalline Silica	**< 5.0**	**< 4.5**
C072221E	**1355**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C072221S	**1353**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C072321E	**1260**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211028970
Project #: 1085-20-01
Receipt Date: 11-Aug-2021
Analysis Date: 17-Aug-2021
Report Date: 17-Aug-2021

Brookhaven Stack Demolition (8/10)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C072321S	**1240**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C072421N	**1053**	α-Quartz	< 5.0	< 4.7
		Cristobalite	< 5.0	< 4.7
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.7**
C072421S	**1045**	α-Quartz	< 5.0	< 4.8
		Cristobalite	< 5.0	< 4.8
		Tridymite	< 20	< 19
		Respirable Crystalline Silica	**< 5.0**	**< 4.8**
C072421X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director

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Revision #v7/MF
Revision Date: 3/09/2020

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Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6261** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) o Drop Mount o Filtration	○ **EPA 100.2** Drinking Water o >10 µm fibers o ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: o Yes o No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric
☒ RespirableCrystallineSilica **NIOSH 7500 / OSHA 142**
○ **NIOSH 0500** – Total Particulates ○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 22/nt **Positive Stop:** ☐ **YES** ☐ **NO**

Signatures

Relinquished By:	Paul Forse	**Date:** 8-10	**Time:** 16:45
Received By:		**Date:** 8/11/21	**Time:** 5:40pm
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C071221S	South/Air	1360
C071221W	West/Air	1333
C071321N	North/Air	1318
C071321E	East/Air	1330
C071421N	North/Air	1233
C071521N	North/Air	1315
C071521S	South/Air	1303
C071621N	North/Air	1323
C071621X	Site/Air	1275
C071921S	South/Air	1258
C071921E	East/Air	1285
C072021E	East/Air	1360
C072021N	North/Air	1375
C072121E	East/Air	1143
C072121S	South/Air	1120
C072221E	East/Air	1355
C072221S	South/Air	1353
C072321E	East/Air	1260
C072321S	South/Air	1240
C072421N	North/Air	1053
C072421S	South/Air	1045
C072421X	Site/Air	1275

Comments/Special Instructions:

Eurofins J3 Resources, Inc. ♦ 6110 West 34th Street ♦ Houston, Texas 77092 ♦ tel: 713-290-0221 ♦ fax: 713-290-0248
Eurofins J3 Resources, Inc. ♦ 3113 Red Bluff Road ♦Pasadena, Texas 77503 ♦ tel: 713-290-0223 ♦ fax: 713-290-0248

J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211029033
Project #: 1085-20-01
Receipt Date: 16-Aug-2021
Analysis Date: 19-Aug-2021
Report Date: 19-Aug-2021

Brookhaven Stack Demolition (8/14)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C072621E	**1415**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C072621S	**1398**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C072721E	**1473**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C072721N	**1460**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C072821W	**1403**	α-Quartz	< 5.0	< 3.6
		Cristobalite	< 5.0	< 3.6
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.6**
C072821S	**1420**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director

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J3 Resources, Inc.
3113 Red Bluff Road Pasadena, Texas 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211029033
Project #: 1085-20-01
Receipt Date: 16-Aug-2021
Analysis Date: 19-Aug-2021
Report Date: 19-Aug-2021

Brookhaven Stack Demolition (8/14)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C072921N	**1483**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 13
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C072921X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**
C073021E	**1335**	α-Quartz	< 5.0	< 3.7
		Cristobalite	< 5.0	< 3.7
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.7**
C073121E	**1128**	α-Quartz		
		Cristobalite		
		Tridymite		
		Respirable Crystalline Silica	**NS**	**NS**
C080221E	**1308**	α-Quartz	< 5.0	< 3.8
		Cristobalite	< 5.0	< 3.8
		Tridymite	< 20	< 15
		Respirable Crystalline Silica	**< 5.0**	**< 3.8**
C080221S	**1290**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director



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j3resources.com

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Respirable Crystalline Silica Performed by X-Ray Diffraction (XRD) NIOSH 7500 (mod.) / OSHA ID-142 (mod.)

David Forse
FPM - Remediations
181 Kenwood Avenue
Oneida, NY 13421

J3 Order #: JP211029033
Project #: 1085-20-01
Receipt Date: 16-Aug-2021
Analysis Date: 19-Aug-2021
Report Date: 19-Aug-2021

Brookhaven Stack Demolition (8/14)

SAMPLE ID	AIR VOLUME (liters)	ANALYTE	ANALYTE MASS (µg/filter)	ANALYTE CONCENTRATION (µg/m^3)
C080321E	**1453**	α-Quartz	< 5.0	< 3.4
		Cristobalite	< 5.0	< 3.4
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.4**
C080321N	**1445**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C080321S	**1433**	α-Quartz	< 5.0	< 3.5
		Cristobalite	< 5.0	< 3.5
		Tridymite	< 20	< 14
		Respirable Crystalline Silica	**< 5.0**	**< 3.5**
C080421S	**1248**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C080421W	**1245**	α-Quartz	< 5.0	< 4
		Cristobalite	< 5.0	< 4
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 4**
C080421X	**1275**	α-Quartz	< 5.0	< 3.9
		Cristobalite	< 5.0	< 3.9
		Tridymite	< 20	< 16
		Respirable Crystalline Silica	**< 5.0**	**< 3.9**

Reporting Limit = α-Quartz: 5µg/filter Cristobalite: 5µg/filter Tridymite: 20µg/filter
**Sample exceeded the method dust loading limit of 2 mg/filter*
N/A = Not Applicable NS = Not Submitted

Analyst: Ameera Mustafa

Scott Ward, Ph.D. Lab Director

These results apply to the sample(s) as received. The analysis has been conducted according to the method(s) listed above. Blank corrections are not applied to data unless requested by the customer. This report is for the exclusive use of the addressed customer and shall not be reproduced, except in full, without written approval of Eurofins J3 Resources, Inc. (J3). Unless otherwise noted, all quality control samples performed within specifications established by the laboratory. J3 is not responsible for reported results that are dependent on volumes provided by non-laboratory personnel. Samples exceeding the method dust loading limit of 2 mg/filter are fractionated to determine the total respirable crystalline silica mass and concentration. The reported Respirable Crystalline Silica value is based on recovery of polymorphs Quartz, Cristobalite, and/or Tridymite at levels greater than their respective reporting limits. The possible presence of crystalline silica polymorphs at levels less than reporting limits cannot be ruled out. When all polymorph results are below reporting limits, Respirable Crystalline Silica is reported as less than the lowest polymorph reporting limit concentration.

Revision #v7/MF
Revision Date: 3/09/2020

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☐ Open Lab Fee

29033

Submitter Name:	David Forse	**Bill to:**	FPM Remediations
Company:	FPM Remediations	**Address:**	181 Kenwood Ave
Address:	Brookhaven National Lab- Stack Demo		
		City/State:	Oneida / NY **Zip:** 13421
City/State:	Upton/NY **Zip:** 11973	**PO #:**	1085-20-01

Project Information

Project Name: Brookhaven Stack Demolition	Project Manager: Dan Ours
Project #: 1085-20-01	Telephone – Office/Cell 315-336-7721
Reports - Email Address: m.grifasi@fpm-remediations.com	
Invoice - Email Address: m.grifasi@fpm-remediations.com	Notification By: Email: ☒ Verbal: ☐
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☐	5 Day ☑

ASBESTOS

PLM - Bulk	PCM - Air	TEM - Air	TEM - Bulk	TEM - Water	TEM - Dust	TEM/PLM Soil/Vermiculite/Ore
EPA 600/R-93/116 ○ Visual Estimation (<1%) ○ 400 Point Count 0.25% ○ 1,000 Point Count 0.1% ○ Gravimetric Reduction ○ Matrix Reduction (+/-) ○ **NIOSH 9002** ○ **OSHA ID-191**	○ **NIOSH 7400** ○ **ASTM D7201** ○ **ISO 8672** ○ **OSHA ID-160**	○ **AHERA** ○ **NIOSH 7402** ○ **ASTM D6281** ○ **ISO 10312** ○ **ISO 13794**	○ Gravimetric Reduction (<1%) ○ Matrix Reduction (+/-) ○ Qualitative (+/-) o *Drop Mount* o Filtration	○ **EPA 100.2** Drinking Water o >10 µm fibers o ≥0.5 µm fibers ○ **EPA 100.2** Effluent / WW Received on ice: ○ Yes ○ No Temp: _____	○ **ASTM D5755** Microvac ○ **ASTM D6480** Wipe ○ **600/J-93/167** Carpet - EPA ○ Bulk Dust Qualitative	○ **ASTM 7521**-TEM (+/-) ○ **ASTM 7521**-TEM (<1%) ○ **CARB 435**-Modified ○ Soil – PLM Only (+/-) ○ Vermiculite - TEM (+/-) ○ Vermiculite-Cincinnati ○ Erionite ID

METALS

Flame AA	Graphite Furnace AA - LEAD	ICP
○ Lead in Paint – **SW846 7420/3050B** ○ Lead in Air – **NIOSH 7082** ○ Lead in Wipes – **SW846 7420/3050B** ○ Lead in Soil – **SW846 7420/3050B** ○ TCLP – **SW846-1311/6010B**	○ Drinking Water – **EPA 200.9** ○ Wastewater – **SW846-7421** ○ Soil/Sludge – **SW846-7421** ○ Air – **NIOSH 7105**	○ Elements in Air – **NIOSH 7300** ○ Wipe/Soil – **SW846-6010B** ○ Effluent – **SW846-6010B** ○ Welding Fume – **NIOSH 7300M**

SILICA/PARTICULATES

X-Ray Diffraction / Gravimetric

☒ Respirable Crystalline Silica **NIOSH 7500 / OSHA 142**

○ **NIOSH 0500** – Total Particulates
○ **NIOSH 0600** – Respirable Particulates

Total Number of Samples Submitted: 18 n.t. **Positive Stop:** ☐ YES ☐ NO

Signatures

Relinquished By:	D Forse	**Date:** 8-14	**Time:** 15:15
Received By:	TM	**Date:** 8/16/21	**Time:** 10:14a
Relinquished By:		**Date:**	**Time:**
Received By:		**Date:**	**Time:**

**Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*
***TAT's are in Business Days rather than Hours (i.e.1 Day TAT = End of Next Business Day)*

Revision #v7/MF
Revision Date: 3/09/2020

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Project Name Brookhaven Stack Demolition
Project Number 1085-20-01

SAMPLE IDENTIFICATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME/CONDITION
C072621E	East/Air	1415
C072621S	South/Air	1398
C072721E	East/Air	1473
C072721N	North/Air	1460
C072821W	West/Air	1403
C072821S	South/Air	1420
C072921N	North/Air	1483
C072921X	Site/Air	1275
C073021E	East/Air	1335
C073121E	East/Air	1128
C080221E	East/Air	1308
C080221S	South/Air	1290
C080321E	East/Air	1453
C080321N	North/Air	1445
C080321S	South/Air	1433
C080421S	South/Air	1248
C080421W	West/Air	1245
C080421X	Site/Air	1275

Comments/Special Instructions:

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Eurofins J3 Resources, Inc. ♦ 3113 Red Bluff Road ♦ Pasadena, Texas 77503 ♦ tel: 713-290-0223 ♦ fax: 713-290-0248

A-4
On-Site Soil for Reuse as Backfill

			Sample ID	BF-03-041321		BF-04-042121		BF-05-051021		BF-06-051021		BF-07-061621	
			Lab Sample ID	160-41698-1		160-41798-1		160-42005-1		160-42005-2		160-42457-1	
			Collection Date	4/13/2021		4/21/2021		5/10/2021		5/10/2021		6/16/2021	
Analyte	Residential Cleanup Value	ALARA Cleanup Goal	Unit	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Radionuclide Method 905 (GFPC)													
Strontium-90	15	10	pCi/g	0.0987	U	-0.107	U	**0.480**		**0.116**	U	0.0164	U
Radionuclide Method GA-01-R Gamma Emitters (GS)													
Actininum-228			pCi/g	**0.577**		**0.364**		**0.407**		**0.484**			
Americium-241	34	22	pCi/g	0.055	U			0.00944	U	0.0572	U	0.0415	U
Bismuth-212			pCi/g			0.014	U						
Bismuth-214			pCi/g	**0.213**		**0.324**		**0.386**		**0.264**		**0.236**	
Cesium-137	23	15	pCi/g	**0.361**		**0.221**		**0.0262**	U	**0.0949**		0.0047	U
Cobalt-60	1,260	840	pCi/g	0.0206	U			0.0133	U	0.00978	U	0.015	U
Lead-212			pCi/g			**0.28**		0.430		0.500		**0.286**	
Lead-214			pCi/g			**0.394**				0.338		**0.292**	
Potassium-40			pCi/g	**4.31**		**4.25**		**3.49**		**3.57**		**3.51**	
Radium-226	5	3.3	pCi/g	**0.213**		**0.324**		**0.386**		**0.264**		**0.236**	
Europium-152	51	34	pCi/g	0.0566	U			0.0685	U	0.089	U	0.0868	U
Europium-154	180	120	pCi/g	0.0196	U			0.0704	U	0.0501	U	**0.0696**	
Europium-155			pCi/g	0	U			0.0522	U	0.005577	U	0.0656	U
Method 6020B (ICP/MS)													
Lead	400		mg/kg	**7.8**		**7.3**	D	**8.2**		**7.6**		**5.4**	
Method 7471B (CVAA)													
Mercury	0.81		mg/kg	**0.036**				**0.12**		**0.13**		**0.041**	H
Method 198.1 (Asbestos)													
Asbestos					ND		ND		ND		ND		ND

Notes:
Qual - Data Qualifier
ND - Not Detected
U - Undetected at the limit of detection
D - The reported value is from a dilution
H - Sample was prepped or analyzed beyond the specified holding time

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41698-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
5/12/2021 6:24:24 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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QC Association Summary 17
Tracer Carrier Summary 18
Subcontract Data 19

Job ID: 160-41698-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41698-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The sample was received on 4/14/2021 9:05 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1º C.

ASBESTOS

Job ID: 160-41698-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample was anlayzed for asbestos by RJ Lee. Refer to the subcaontract section of the report for notes and results of this analysis.

PERCENT SOLIDS
Sample BF-03-041321 (160-41698-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 04/14/2021 and 04/15/2021.

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

STRONTIUM-90 (GFPC)
Sample BF-03-041321 (160-41698-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 04/14/2021, prepared on 04/28/2021 and analyzed on 05/07/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Sample BF-03-041321 (160-41698-1) was analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 04/14/2021, prepared on 04/16/2021 and analyzed on 05/07/2021.

Preparation Batch 160-505916:
For samples BF-03-041321 (160-41698-1), (LCS 160-505916/2-A), (MB 160-505916/1-A), (820-457-B-1-A), and (820-457-B-1-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63
Sample BF-03-041321 (160-41698-1) was analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 04/14/2021, prepared on 04/22/2021 and analyzed on 04/27/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date: 04-13-21**	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier: Fed Ex**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA 600-R-93	Lead (ICP/MS) - EPA 6020B	Mercury - EPA 7470A	Sample Specific Notes:
BF-03-041321	13-Apr	0:00	C	Soil	2	N	N	1	1	1	1	1	Plastic bag for rad, Glass jar for chemical
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____										1	1	1	

160-41698 Chain of Custody

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services, Inc.	Date/Time:04-13-21 17:00	Received by: FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: EIA STL	Date/Time: 4/14/21 0905
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-211817.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-41698-1
Address: 777 New Durham Road, ,	Due Date Requested: 5/11/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050B (MOD) NY Part 375 Analyte List	7471B/7471B_Prep	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BF-03-041321 (160-41698-1)	4/13/21	14:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	4/14/21 1627	ETA STL	Aaciemo Via Fedex	4/15/21 910	TAE
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.4°C / 3.1°C

Ver: 11/01/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1061630

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-211819.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-41698-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 5/12/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BF-03-041321 (160-41698-1)	4/13/21	14:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	4/14/2021 1631	ETA STL	Linda Maugus	04152021 9:35Am	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41698-1

Login Number: 41698
List Number: 1
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41698-1

Login Number: 41698
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 04/15/21 11:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41698-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-1

Method	Method Description	Protocol	Laboratory
Moisture	Percent Moisture	EPA	TAL EDI
Moisture	Percent Moisture	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41698-1	BF-03-041321	Solid	04/13/21 14:00	04/14/21 09:05	

Client Sample ID: BF-03-041321

Date Collected: 04/13/21 14:00
Date Received: 04/14/21 09:05

Lab Sample ID: 160-41698-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0987	U	0.175	0.175	3.00	0.304	pCi/g	04/28/21 12:20	05/07/21 14:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*76.9*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:58*	*1*
Y Carrier	*92.3*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:58*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0550	U	0.108	0.108		0.184	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Cesium-137	**0.361**		0.0599	0.0703		0.0353	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Cobalt-60	0.0206	U	0.0108	0.0110		0.0439	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Radium-226	**0.213**		0.0638	0.0674	1.00	0.0608	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Europium-152	0.0566	U	0.0872	0.0874		0.138	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Europium-154	0.0196	U	0.0239	0.0240		0.104	pCi/g	04/16/21 16:08	05/07/21 06:47	1
Europium-155	0.000	U	0.0543	0.0543		0.456	pCi/g	04/16/21 16:08	05/07/21 06:47	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.577*		*0.134*	*0.146*		*0.0599*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*
Bi-214	*0.213*		*0.0638*	*0.0674*		*0.0608*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*
K-40	*4.31*		*0.760*	*0.874*		*0.439*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*
Pb-212	*0.378*		*0.0647*	*0.0805*		*0.0641*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*
Pb-214	*0.351*		*0.0708*	*0.0793*		*0.0820*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*
Tl-208	*0.178*		*0.0372*	*0.0414*		*0.0146*	*pCi/g*	*04/16/21 16:08*	*05/07/21 06:47*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.00993	U	0.914	0.914	5.00	1.61	pCi/g	04/22/21 09:19	04/27/21 14:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*77.6*		*40 - 110*	*04/22/21 09:19*	*04/27/21 14:47*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-507507/11-A
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507507

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.2521	U	0.187	0.188	3.00	0.299	pCi/g	04/28/21 12:20	05/07/21 14:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.8*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*
Y Carrier	*92.0*		*40 - 110*	*04/28/21 12:20*	*05/07/21 14:59*	*1*

Lab Sample ID: LCS 160-507507/1-A
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507507

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.24	7.876		0.831	3.00	0.284	pCi/g	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*83.0*		*40 - 110*
Y Carrier	*91.2*		*40 - 110*

Lab Sample ID: 160-41700-A-7-I DU
Matrix: Solid
Analysis Batch: 508776

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 507507

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.00379	U		0.1270	U	0.176	3.00	0.300	pCi/g			1.03	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*80.2*		*40 - 110*
Y Carrier	*92.3*		*40 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-505916/1-A
Matrix: Solid
Analysis Batch: 508730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 505916

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.02617	U	0.0910	0.0911		0.160	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Cesium-137	0.0000	U	0.00927	0.00927		0.0674	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Cobalt-60	-0.02665	U	0.0555	0.0556		0.0907	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Radium-226	-0.1021	U	0.0822	0.0829	1.00	0.357	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Europium-152	0.04537	U	0.0336	0.0339		0.136	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Europium-154	0.08448	U	0.0499	0.0507		0.102	pCi/g	04/16/21 16:08	05/07/21 06:44	1
Europium-155	0.01890	U	0.0646	0.0646		0.269	pCi/g	04/16/21 16:08	05/07/21 06:44	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	04/16/21 16:08	05/07/21 06:44	1

Lab Sample ID: LCS 160-505916/2-A
Matrix: Solid
Analysis Batch: 508729

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 505916

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.4	97.54		11.3		1.24	pCi/g	101	87 - 116		
Cesium-137			26.5	29.72		3.06		0.233	pCi/g	112	87 - 120		
Cobalt-60			8.99	9.780		1.01		0.0829	pCi/g	109	87 - 115		

Lab Sample ID: 820-457-B-1-B DU
Matrix: Solid
Analysis Batch: 508737

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 505916

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	0.136	U		-0.02589	U	0.268		0.400	pCi/g			0.79	2
Cesium-137	0.0334	U		-0.02769	U	0.0962		0.189	pCi/g			0.91	2
Cobalt-60	-0.0233	U		-0.05242	U	0.118		0.153	pCi/g			0.36	2
Radium-226	0.171	U		0.03496	U	0.250	1.00	0.446	pCi/g			0.91	2
Europium-152	0.0371	U		0.1204	U	0.0963		0.267	pCi/g			1.14	2
Europium-154	-0.0768	U		0.1284	U	0.113		0.196	pCi/g			2.25	2
Europium-155	0.000	U		0.1171	U	0.247		0.661	pCi/g			0.79	2

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Pb-210	315			282.6		34.4		7.57	pCi/g			1.20	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-506561/1-A
Matrix: Solid
Analysis Batch: 507475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 506561

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.04080	U	0.778	0.778	5.00	1.36	pCi/g	04/22/21 09:19	04/27/21 12:35	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni Carrier	90.6		40 - 110	04/22/21 09:19	04/27/21 12:35	1

Lab Sample ID: LCS 160-506561/2-A
Matrix: Solid
Analysis Batch: 507475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 506561

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.6	18.88		2.46	5.00	1.49	pCi/g	87	75 - 125		

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-506561/2-A
Matrix: Solid
Analysis Batch: 507475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 506561

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni Carrier	82.7		40 - 110

Lab Sample ID: 160-41698-1 DU
Matrix: Solid
Analysis Batch: 507475

Client Sample ID: BF-03-041321
Prep Type: Total/NA
Prep Batch: 506561

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	-0.00993	U		0.3157	U	0.906	5.00	1.56	pCi/g			0.50	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni Carrier	78.7		40 - 110

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-1

General Chemistry

Analysis Batch: 505644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	Moisture	
160-41702-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 771686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	Moisture	
460-231974-C-3 DU	Duplicate	Total/NA	Solid	Moisture	

Rad

Leach Batch: 505645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	Dry and Grind	
160-41698-1 DU	BF-03-041321	Total/NA	Solid	Dry and Grind	

Prep Batch: 505916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	Fill_Geo-21	505645
MB 160-505916/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-505916/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
820-457-B-1-B DU	Duplicate	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 506561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	Ext_Chrom_LSC	505645
MB 160-506561/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-506561/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-41698-1 DU	BF-03-041321	Total/NA	Solid	Ext_Chrom_LSC	505645

Leach Batch: 506573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41700-A-7-I DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 507507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	DPS-7	505645
MB 160-507507/11-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-507507/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-41700-A-7-I DU	Duplicate	Total/NA	Solid	DPS-7	506573

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-41698-1	BF-03-041321	76.9	92.3
160-41700-A-7-I DU	Duplicate	80.2	92.3
LCS 160-507507/1-A	Lab Control Sample	83.0	91.2
MB 160-507507/11-A	Method Blank	78.8	92.0

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ni
Lab Sample ID	Client Sample ID	(40-110)
160-41698-1	BF-03-041321	77.6
160-41698-1 DU	BF-03-041321	78.7
LCS 160-506561/2-A	Lab Control Sample	82.7
MB 160-506561/1-A	Method Blank	90.6

Tracer/Carrier Legend

Ni = Ni Carrier

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	04/29/2021
Sample Receipt Date	04/15/2021
RJ Lee Group Job No.	AOH1061663-0
Authorization/P.O. No.	
Client Job No./Name	160-41698-1

Analysis: Asbestos in Bulk Samples by Point Count

Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10535722.HPL	BF-03-041321 (160-41698-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	WT-04/28/2021

Description: Tan Sand.
400 Point Count. Detection Limit=0.25%.
No Asbestos Detected. NY ELAP Method 198.1

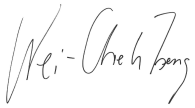
Weight Loss: 0.0%

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-41698-1 RJ Lee Group Job No: AOH1061663-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: 

Wei-Chieh Tseng, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41798-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
5/25/2021 1:53:52 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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Job ID: 160-41798-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41798-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The sample was received on 4/22/2021 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

ASBESTOS

Job ID: 160-41798-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample was analyzed for asbestos by RJ Lee. Refer to the subcontract section of the report for notes and results of this analysis.

METALS (ICP/MS)
Sample BF-04-042121 (160-41798-1) was analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 04/28/2021 and analyzed on 05/03/2021.

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

PERCENT SOLIDS
Sample BF-04-042121 (160-41798-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 04/26/2021.

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

STRONTIUM-90 (GFPC)
Sample BF-04-042121 (160-41798-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 04/23/2021, prepared on 05/04/2021 and analyzed on 05/13/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Sample BF-04-042121 (160-41798-1) was analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 04/23/2021, prepared on 04/29/2021 and analyzed on 05/20/2021.

Preparation Batch 160-507694:
The relative percent difference (RPD) and replicate error ratio (RER) is outside of the acceptance limits of 40%/1 for Co-60 (217%/1.76). Both the sample and duplicate activity were less than the MDC: (160-41814-A-4-C DU).

The method blank (MB) z-score is within limits and is stored in the level IV raw data: (MB 160-507694/1-A).

For samples BF-04-042121 (160-41798-1), (LCS 160-507694/2-A), (MB 160-507694/1-A), (160-41814-A-4-B), and (160-41814-A-4-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223

Job ID: 160-41798-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date:**	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier:**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Sample Specific Notes:
BF-04-042121	21-Apr	15:00	C	S	2	N	N	1	1	1	1	1	Plastic Bag for Rad, Glass Jar for Chemical
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						

160-41798 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:4-21-21/15:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 4/22/21 0900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41798-1

Login Number: 41798
List Number: 1
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41798-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41798-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL SL
Moisture	Percent Moisture	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

None = None

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

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41798-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41798-1	BF-04-042121	Solid	04/21/21 15:00	04/22/21 09:00	

Client Sample ID: BF-04-042121

Lab Sample ID: 160-41798-1

Date Collected: 04/21/21 15:00

Matrix: Solid

Date Received: 04/22/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.107	U	0.169	0.169	3.00	0.333	pCi/g	05/04/21 16:06	05/13/21 16:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*67.9*		*40 - 110*	*05/04/21 16:06*	*05/13/21 16:16*	*1*
Y Carrier	*89.7*		*40 - 110*	*05/04/21 16:06*	*05/13/21 16:16*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.364**		0.182	0.186		0.177	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Bismuth-212	0.0140	U	0.697	0.697		1.28	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Bismuth-214	**0.324**		0.102	0.107		0.0880	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Lead-212	**0.280**		0.0867	0.0937		0.117	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Lead-214	**0.394**		0.0963	0.104		0.0806	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Potassium-40	**4.25**		0.964	1.05		0.580	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Radium-226	**0.324**		0.102	0.107	1.00	0.0880	pCi/g	04/29/21 12:54	05/20/21 05:45	1
Cesium-137	**0.221**		0.0690	0.0726		0.0548	pCi/g	04/29/21 12:54	05/20/21 05:45	1

Client Sample ID: BF-04-042121

Lab Sample ID: 160-41798-1

Date Collected: 04/21/21 15:00

Matrix: Solid

Date Received: 04/22/21 09:00

Percent Solids: 95.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**7.3**	**D**	0.27	0.11	mg/Kg	☼	04/28/21 10:49	05/03/21 21:34	2

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41798-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-507496/1-A ^2
Matrix: Solid
Analysis Batch: 508220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507496

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.23	U	0.28	0.12	mg/Kg		04/28/21 10:49	05/03/21 20:39	2

Lab Sample ID: LCS 160-507496/2-A ^2
Matrix: Solid
Analysis Batch: 508220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead			93.9	91.9	D	mg/Kg		98	84 - 118		

Lab Sample ID: 280-147756-A-1-D MS ^2
Matrix: Solid
Analysis Batch: 508220

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 507496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead	3.1	D	90.9	88.4	D	mg/Kg		94	84 - 118		

Lab Sample ID: 280-147756-A-1-E MSD ^2
Matrix: Solid
Analysis Batch: 508220

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 507496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.1	D	89.0	85.9	D	mg/Kg		93	84 - 118	3	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-508276/4-A
Matrix: Solid
Analysis Batch: 509482

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508276

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.03066	U	0.154	0.154	3.00	0.287	pCi/g	05/04/21 16:06	05/13/21 16:16	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*93.1*		*40 - 110*	*05/04/21 16:06*	*05/13/21 16:16*	*1*
Y Carrier	*87.1*		*40 - 110*	*05/04/21 16:06*	*05/13/21 16:16*	*1*

Lab Sample ID: LCS 160-508276/1-A
Matrix: Solid
Analysis Batch: 509482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508276

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.23	8.761		0.919	3.00	0.331	pCi/g	106	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*92.6*		*40 - 110*
Y Carrier	*75.1*		*40 - 110*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: 160-41798-1 DU
Matrix: Solid
Analysis Batch: 509482

Client Sample ID: BF-04-042121
Prep Type: Total/NA
Prep Batch: 508276

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.107	U		-0.01328	U	0.167	3.00	0.311	pCi/g			0.77	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*78.8*		*40 - 110*
Y Carrier	*85.6*		*40 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-507694/1-A
Matrix: Solid
Analysis Batch: 510632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507694

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.08089	U	0.182	0.182		0.317	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Bismuth-212	0.0000	U	0.146	0.146		0.672	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Bismuth-214	0.009784	U	0.177	0.177		0.322	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Lead-212	0.01157	U	0.113	0.113		0.201	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Lead-214	-0.04959	U	0.117	0.117		0.213	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Potassium-40	0.06077	U	1.09	1.09		1.53	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Radium-226	0.009784	U	0.177	0.177	1.00	0.322	pCi/g	04/29/21 12:54	05/20/21 06:22	1
Cesium-137	-0.02360	U	0.0819	0.0820		0.133	pCi/g	04/29/21 12:54	05/20/21 06:22	1

Lab Sample ID: LCS 160-507694/2-A
Matrix: Solid
Analysis Batch: 510631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507694

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.4	89.63		10.3		1.15	pCi/g	93	87 - 116		
Cesium-137			26.5	27.60		2.86		0.238	pCi/g	104	87 - 120		
Cobalt-60			8.94	8.775		0.928		0.130	pCi/g	98	87 - 115		

Lab Sample ID: 160-41814-A-4-C DU
Matrix: Solid
Analysis Batch: 510631

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 507694

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	1.53			1.179		0.499		0.502	pCi/g			1.19	2
Bismuth-212	2.23			2.345		0.968		0.869	pCi/g			0.18	2
Bismuth-214	2.52			2.774		0.419		0.205	pCi/g			0.90	2
Lead-212	1.37			1.444		0.216		0.157	pCi/g			0.46	2
Lead-214	2.81			3.003		0.389		0.205	pCi/g			0.71	2
Potassium-40	9.73			10.90		1.96		0.647	pCi/g			0.88	2
Radium-226	2.52			2.774		0.419	1.00	0.205	pCi/g			0.90	2
Cesium-137	-0.0655	U		-0.05373	U	0.260		0.177	pCi/g			0.08	2

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-41798-1
Project/Site: BNL Decommissioning Project

Metals

Prep Batch: 507496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	3050B	
MB 160-507496/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 160-507496/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
280-147756-A-1-D MS ^2	Matrix Spike	Total/NA	Solid	3050B	
280-147756-A-1-E MSD ^2	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 508220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	6020B	507496
MB 160-507496/1-A ^2	Method Blank	Total/NA	Solid	6020B	507496
LCS 160-507496/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	507496
280-147756-A-1-D MS ^2	Matrix Spike	Total/NA	Solid	6020B	507496
280-147756-A-1-E MSD ^2	Matrix Spike Duplicate	Total/NA	Solid	6020B	507496

General Chemistry

Analysis Batch: 507100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	Moisture	
280-147755-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Rad

Leach Batch: 506729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	Dry and Grind	
160-41798-1 DU	BF-04-042121	Total/NA	Solid	Dry and Grind	

Leach Batch: 507076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41814-A-4-C DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 507694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	Fill_Geo-21	506729
MB 160-507694/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-507694/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-41814-A-4-C DU	Duplicate	Total/NA	Solid	Fill_Geo-21	507076

Prep Batch: 508276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41798-1	BF-04-042121	Total/NA	Solid	DPS-7	506729
MB 160-508276/4-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-508276/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-41798-1 DU	BF-04-042121	Total/NA	Solid	DPS-7	506729

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41798-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-41798-1	BF-04-042121	67.9	89.7
160-41798-1 DU	BF-04-042121	78.8	85.6
LCS 160-508276/1-A	Lab Control Sample	92.6	75.1
MB 160-508276/4-A	Method Blank	93.1	87.1

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-42005-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
6/11/2021 1:58:59 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-42005-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-42005-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 5/11/2021 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

ASBESTOS

Job ID: 160-42005-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample was analyzed for asbestos by RJ Lee. Refer to the subcontract section of the report for notes and results of this analysis.

PERCENT SOLIDS

Samples BF-05-051021 (160-42005-1) and BF-06-051021 (160-42005-2) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 05/11/2021.

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

STRONTIUM-90 (GFPC)

Samples BF-05-051021 (160-42005-1) and BF-06-051021 (160-42005-2) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 05/11/2021, prepared on 05/27/2021 and analyzed on 06/09/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples BF-05-051021 (160-42005-1) and BF-06-051021 (160-42005-2) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 05/11/2021, prepared on 05/13/2021 and analyzed on 06/03/2021.

Preparation Batch 160-509473:
For samples BF-05-051021 (160-42005-1), BF-06-051021 (160-42005-2), (LCS 160-509473/2-A), (MB 160-509473/1-A), (160-42040-A-1-A), and (160-42040-A-1-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**	COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard** Date:
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218	**Lab Contact: Ivan Vania** Carrier:
Oneida, NY 13421	**Analysis Turnaround Time**	___1___ of ___1___ COCs
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS	TALS Project #:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days	Sampler: B. Gaudette
Project Name: BNL 705 Stack Demo	☐ 2 weeks	**For Lab Use Only:**
Site: BNL	☐ 1 week	Walk-in Client:
P O # 1085-20-01-01	☐ 2 days	Lab Sampling:
	☐ 1 day	Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Sample Specific Notes:
BF-05-051021	10-May	15:00	C	S	2	N	N	1	1	1	1	1	Plastic Bag for Rad, Glass Jar for Chemical
BF-06-051021	10-May	15:00	C	S	2	N	N	1	1	1	1	1	
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						

160-42005 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:5-10-21/15:00	Received by:Fed Ex FED EX	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by:	Company:	Date/Time: 5/11/21 09:10
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-213040.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42005-1
Address: 4955 Yarrow Street,	Due Date Requested: 6/8/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A_DOD5/1311T_M (MOD) RCRA ICPMS Metals	6020A_DOD5/3020A_L (MOD) RCRA ICPMS Metals	7470A_DOD5/1311T_Hg Mercury	7470A_DOD5/7470A_Prep_L Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
BF-05-051021 (160-42005-1)	5/10/21	15:00 Eastern		Solid			X	X	X	X	1	
BF-06-051021 (160-42005-2)	5/10/21	15:00 Eastern		Solid			X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/11/21 1803	ETA STL		5/12/2021 1510	ETA Den
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.6 IR11 CF10.4

Ver: 11/01/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1061985-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-213042.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42005-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 6/9/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BF-05-051021 (160-42005-1)	5/10/21	15:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
BF-06-051021 (160-42005-2)	5/10/21	15:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/11/21 1820	EASTL	Linda Maugeri	05-12-2021 1:52 PM	RJ Lee Group.
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42005-1

Login Number: 42005
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-42005-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42005-1

Method	Method Description	Protocol	Laboratory
Moisture	Percent Moisture	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

None = None

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42005-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-42005-1	BF-05-051021	Solid	05/10/21 15:00	05/11/21 09:10	
160-42005-2	BF-06-051021	Solid	05/10/21 15:00	05/11/21 09:10	

Client Sample ID: BF-05-051021

Lab Sample ID: 160-42005-1

Date Collected: 05/10/21 15:00

Matrix: Solid

Date Received: 05/11/21 09:10

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.480**		0.240	0.243	3.00	0.358	pCi/g	05/27/21 11:07	06/09/21 17:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*67.3*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*
Y Carrier	*86.0*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00944	U	0.109	0.109		0.172	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Cesium-137	0.0262	U	0.0593	0.0594		0.104	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Cobalt-60	0.0113	U	0.0540	0.0540		0.0690	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Radium-226	**0.386**		0.100	0.108	0.200	0.0771	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Europium-152	0.0685	U	0.126	0.126		0.126	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Europium-154	0.0704	U	0.155	0.155		0.108	pCi/g	05/13/21 11:19	06/03/21 09:41	1
Europium-155	0.0522	U	0.120	0.120		0.207	pCi/g	05/13/21 11:19	06/03/21 09:41	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.407*		*0.123*	*0.130*		*0.0925*	*pCi/g*	*05/13/21 11:19*	*06/03/21 09:41*	*1*
Bi-214	*0.386*		*0.100*	*0.108*		*0.0771*	*pCi/g*	*05/13/21 11:19*	*06/03/21 09:41*	*1*
K-40	*3.49*		*0.876*	*0.943*		*0.640*	*pCi/g*	*05/13/21 11:19*	*06/03/21 09:41*	*1*
Pb-212	*0.430*		*0.0836*	*0.0998*		*0.0859*	*pCi/g*	*05/13/21 11:19*	*06/03/21 09:41*	*1*
Tl-208	*0.139*		*0.0592*	*0.0609*		*0.0614*	*pCi/g*	*05/13/21 11:19*	*06/03/21 09:41*	*1*

Client Sample ID: BF-06-051021

Lab Sample ID: 160-42005-2

Date Collected: 05/10/21 15:00

Matrix: Solid

Date Received: 05/11/21 09:10

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.116	U	0.244	0.244	3.00	0.427	pCi/g	05/27/21 11:07	06/09/21 17:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*51.8*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*
Y Carrier	*90.1*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0572	U	0.143	0.143		0.244	pCi/g	05/13/21 11:19	06/03/21 10:18	1
Cesium-137	**0.0949**		0.0384	0.0396		0.0318	pCi/g	05/13/21 11:19	06/03/21 10:18	1
Cobalt-60	-0.00978	U	0.0449	0.0449		0.0565	pCi/g	05/13/21 11:19	06/03/21 10:18	1
Radium-226	**0.264**		0.0927	0.0965	0.200	0.101	pCi/g	05/13/21 11:19	06/03/21 10:18	1
Europium-152	0.0890	U	0.175	0.175		0.150	pCi/g	05/13/21 11:19	06/03/21 10:18	1

Client Sample ID: BF-06-051021
Lab Sample ID: 160-42005-2

Date Collected: 05/10/21 15:00
Matrix: Solid

Date Received: 05/11/21 09:10

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0501	U	0.0866	0.0868		0.111	pCi/g	05/13/21 11:19	06/03/21 10:18	1
Europium-155	-0.00577	U	0.236	0.236		0.255	pCi/g	05/13/21 11:19	06/03/21 10:18	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.484*		*0.129*	*0.138*		*0.0795*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*
Bi-214	*0.264*		*0.0927*	*0.0965*		*0.101*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*
K-40	*3.57*		*1.03*	*1.09*		*0.935*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*
Pb-212	*0.500*		*0.0857*	*0.107*		*0.0831*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*
Pb-214	*0.338*		*0.0820*	*0.0889*		*0.0826*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*
Tl-208	*0.164*		*0.0495*	*0.0522*		*0.0450*	*pCi/g*	*05/13/21 11:19*	*06/03/21 10:18*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-511903/5-A
Matrix: Solid
Analysis Batch: 513485

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511903

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.2594	U	0.302	0.303	3.00	0.509	pCi/g	05/27/21 11:07	06/09/21 17:17	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.5*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*
Y Carrier	*61.3*		*40 - 110*	*05/27/21 11:07*	*06/09/21 17:17*	*1*

Lab Sample ID: LCS 160-511903/1-A
Matrix: Solid
Analysis Batch: 513485

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511903

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.22	7.669		0.808	3.00	0.286	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*83.8*		*40 - 110*
Y Carrier	*88.6*		*40 - 110*

Lab Sample ID: 160-42005-1 DU
Matrix: Solid
Analysis Batch: 513485

Client Sample ID: BF-05-051021
Prep Type: Total/NA
Prep Batch: 511903

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.480			0.2423	U	0.202	3.00	0.327	pCi/g			1.48	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*74.8*		*40 - 110*
Y Carrier	*89.0*		*40 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-509473/1-A
Matrix: Solid
Analysis Batch: 512590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509473

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.04686	U	0.0995	0.0996		0.172	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Cesium-137	0.0000	U	0.00626	0.00626		0.0889	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Cobalt-60	0.0000	U	0.00919	0.00919		0.0346	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Radium-226	-0.02235	U	0.101	0.101	0.200	0.187	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Europium-152	0.05219	U	0.124	0.124		0.110	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Europium-154	0.05593	U	0.0331	0.0336		0.0853	pCi/g	05/13/21 11:19	06/03/21 10:17	1
Europium-155	0.03677	U	0.129	0.129		0.225	pCi/g	05/13/21 11:19	06/03/21 10:17	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	05/13/21 11:19	06/03/21 10:17	1

Lab Sample ID: LCS 160-509473/2-A
Matrix: Solid
Analysis Batch: 512589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509473

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.4	100.1		11.5		1.20	pCi/g	104	87 - 116		
Cesium-137			26.4	28.79		2.97		0.248	pCi/g	109	87 - 120		
Cobalt-60			8.90	9.563		0.995		0.128	pCi/g	107	87 - 115		

Lab Sample ID: 160-42040-A-1-B DU
Matrix: Solid
Analysis Batch: 512628

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 509473

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	-0.0103	U		-0.02932	U	0.108		0.187	pCi/g			0.25	2
Cesium-137	-0.0202	U		-0.007216	U	0.0442		0.0801	pCi/g			0.42	2
Cobalt-60	-0.0216	U		-0.01392	U	0.0571		0.0681	pCi/g			0.19	2
Radium-226	0.540			0.5136		0.122	0.200	0.0866	pCi/g			0.26	2
Europium-152	0.0963	U		0.04323	U	0.0286		0.142	pCi/g			0.57	2
Europium-154	0.0371	U		0.02182	U	0.0420		0.0723	pCi/g			0.39	2
Europium-155	0.0384	U		-0.005228	U	0.148		0.315	pCi/g			0.37	2

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Bi-214	0.540			0.5136		0.122		0.0866	pCi/g			0.26	2
K-40	2.78			2.303		0.686		0.566	pCi/g			0.84	2
Pb-212	0.0248	U		0.1762		0.0616		0.0735	pCi/g			2.09	2
Pb-214	0.650			0.4915		0.107		0.103	pCi/g			1.71	2
Tl-208	0.0327	U		0.08644		0.0414		0.0420	pCi/g			1.46	2

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-42005-1
Project/Site: BNL Decommissioning Project

General Chemistry

Analysis Batch: 509158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	Moisture	
160-42005-2	BF-06-051021	Total/NA	Solid	Moisture	

Rad

Leach Batch: 509159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	Dry and Grind	
160-42005-2	BF-06-051021	Total/NA	Solid	Dry and Grind	
160-42005-1 DU	BF-05-051021	Total/NA	Solid	Dry and Grind	

Prep Batch: 509473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	Fill_Geo-21	509159
160-42005-2	BF-06-051021	Total/NA	Solid	Fill_Geo-21	509159
MB 160-509473/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-509473/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-42040-A-1-B DU	Duplicate	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 511903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	DPS-7	509159
160-42005-2	BF-06-051021	Total/NA	Solid	DPS-7	509159
MB 160-511903/5-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-511903/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-42005-1 DU	BF-05-051021	Total/NA	Solid	DPS-7	509159

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42005-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-42005-1	BF-05-051021	67.3	86.0
160-42005-1 DU	BF-05-051021	74.8	89.0
160-42005-2	BF-06-051021	51.8	90.1
LCS 160-511903/1-A	Lab Control Sample	83.8	88.6
MB 160-511903/5-A	Method Blank	80.5	61.3

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	05/27/2021
Sample Receipt Date	05/12/2021
RJ Lee Group Job No.	AOH1061985-0
Authorization/P.O. No.	
Client Job No./Name	160-42005-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

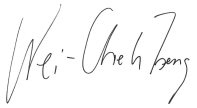
RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10537264.HPL	BF-05-051021 (160-42005-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	WT-05/26/2021
Description:	Tan Rock. 400 Point Count. Detection Limit=0.25%. NYELAP 198.1 No Asbestos Detected.							
Weight Loss: 0.0%								
10537265.HPL	BF-05-051021 (160-42005-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	WT-05/26/2021
Description:	Tan Rock. 400 Point Count. Detection Limit=0.25%. NYELAP 198.1 No Asbestos Detected.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-42005-1 RJ Lee Group Job No: AOH1061985-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: 

Wei-Chieh Tseng, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

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AOH1061985-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-213042.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42005-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 6/9/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BF-05-051021 (160-42005-1)	5/10/21	15:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
BF-06-051021 (160-42005-2)	5/10/21	15:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/11/21 1820	EASTL	Linda Maugeri	05-12-2021 1:52 PM	RJ Lee Group.
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-42457-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
7/30/2021 2:45:04 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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Job ID: 160-42457-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-42457-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The sample was received on 6/17/2021 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.7º C.

Asbestos

Job ID: 160-42457-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for notes regarding this analysis.

STRONTIUM-90 (GFPC)
Sample BF-07-061621 (160-42457-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 06/18/2021, prepared on 07/15/2021 and analyzed on 07/27/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Sample BF-07-061621 (160-42457-1) was analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 06/18/2021, prepared on 06/22/2021 and analyzed on 07/14/2021.

Preparation Batch 160-515451:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrix. The sample contained small rocks: BF-07-061621 (160-42457-1) and (160-42457-A-1-A DU).

The detection goal of 0.200 pCi/L was not met for Ra-226. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, the Ra-226 is well below the RL and MDC: (190-26213-A-1-A) and (190-26213-A-1-C DU).

For samples BF-07-061621 (160-42457-1), (LCS 160-515451/2-A), (MB 160-515451/1-A), (190-26213-A-1-A), and (190-26213-A-1-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

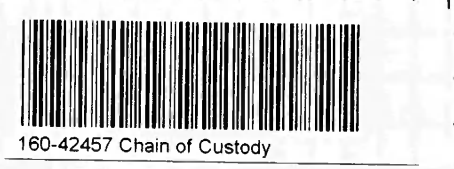
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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 6/16/21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: FedEX	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Sample Specific Notes:
BF-07-061621	16-Jun	15:00	C	S	2	N	N	1	1	1	1	1	Plastic Bag for Rad, Glass Jar for Chemical
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:6-16-21/15:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FE	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 6/17/21 0920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-214865.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42457-1
Address: 777 New Durham Road, ,	Due Date Requested: 7/28/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050B (MOD) NY Part 375 Analyte List	7471B/7471B_Prep	Moisture/ (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BF-07-061621 (160-42457-1)	6/16/21	15:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Winings	6/17/2021 17:00	ETA SRL	Adriano Via Fedex	6/18/21 1500	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.0°C/3.5°C

Ver: 11/01/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH 10624650

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-214873.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42457-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 7/29/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BF-07-061621 (160-42457-1)	6/16/21	15:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 6/17/21 17:00	Company ETA SL	Received by: Linda Mangus	Date/Time: 06-18-2021 09:06 Am	Company RJ Lee Group	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42457-1

Login Number: 42457
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-42457-1
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-1

Method	Method Description	Protocol	Laboratory
905	Strontium-90 (GFPC)	EPA	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy

EPA = US Environmental Protection Agency

EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.

None = None

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-42457-1	BF-07-061621	Solid	06/16/21 15:00	06/17/21 09:20

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-1

Client Sample ID: BF-07-061621

Date Collected: 06/16/21 15:00
Date Received: 06/17/21 09:20

Lab Sample ID: 160-42457-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0164	U	0.152	0.152	3.00	0.277	pCi/g	07/15/21 09:31	07/27/21 19:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.2*		*40 - 110*	*07/15/21 09:31*	*07/27/21 19:17*	*1*
Y Carrier	*102*		*40 - 110*	*07/15/21 09:31*	*07/27/21 19:17*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0415	U	0.0836	0.0837		0.110	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Cesium-137	0.00470	U	0.0314	0.0315		0.0574	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Cobalt-60	0.0150	U	0.0131	0.0132		0.0221	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Radium-226	**0.236**		0.0748	0.0786	0.200	0.0768	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Europium-152	0.0868	U	0.0463	0.0472		0.120	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Europium-154	**0.0696**		0.0364	0.0371		0.0653	pCi/g	06/22/21 14:52	07/14/21 05:54	1
Europium-155	-0.0656	U	0.205	0.206		0.350	pCi/g	06/22/21 14:52	07/14/21 05:54	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Bi-214	*0.236*		*0.0748*	*0.0786*		*0.0768*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*
K-40	*3.51*		*0.638*	*0.729*		*0.223*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*
Pb-210	*4.44*		*1.58*	*1.66*		*1.76*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*
Pb-212	*0.286*		*0.0581*	*0.0685*		*0.0645*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*
Pb-214	*0.292*		*0.0613*	*0.0681*		*0.0707*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*
Tl-208	*0.112*		*0.0301*	*0.0322*		*0.0209*	*pCi/g*	*06/22/21 14:52*	*07/14/21 05:54*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-518702/5-A
Matrix: Solid
Analysis Batch: 520378

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 518702

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.03323	U	0.169	0.169	3.00	0.314	pCi/g	07/15/21 09:31	07/27/21 19:16	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.3*		*40 - 110*	*07/15/21 09:31*	*07/27/21 19:16*	*1*
Y Carrier	*97.9*		*40 - 110*	*07/15/21 09:31*	*07/27/21 19:16*	*1*

Lab Sample ID: LCS 160-518702/1-A
Matrix: Solid
Analysis Batch: 520378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 518702

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.19	7.821		0.813	3.00	0.287	pCi/g	95	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*86.0*		*40 - 110*
Y Carrier	*104*		*40 - 110*

Lab Sample ID: 160-42457-1 DU
Matrix: Solid
Analysis Batch: 520378

Client Sample ID: BF-07-061621
Prep Type: Total/NA
Prep Batch: 518702

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0164	U		0.1095	U	0.191	3.00	0.331	pCi/g			0.75	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*73.9*		*40 - 110*
Y Carrier	*100*		*40 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-515451/1-A
Matrix: Solid
Analysis Batch: 518559

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 515451

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.03377	U	0.0772	0.0773		0.135	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Cesium-137	-0.02396	U	0.0422	0.0423		0.0736	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Cobalt-60	-0.001069	U	0.0588	0.0588		0.0362	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Radium-226	-0.02246	U	0.154	0.154	0.200	0.277	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Europium-152	0.07438	U	0.0515	0.0521		0.119	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Europium-154	0.07152		0.102	0.103		0.0608	pCi/g	06/22/21 14:52	07/14/21 05:57	1
Europium-155	-0.001843	U	0.0699	0.0699		0.153	pCi/g	06/22/21 14:52	07/14/21 05:57	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	06/22/21 14:52	07/14/21 05:57	1

Lab Sample ID: LCS 160-515451/2-A
Matrix: Solid
Analysis Batch: 518551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 515451

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	99.32		11.4		1.13	pCi/g	103	87 - 116		
Cesium-137			26.4	28.79		2.97		0.287	pCi/g	109	87 - 120		
Cobalt-60			8.77	9.230		0.959		0.119	pCi/g	105	87 - 115		

Lab Sample ID: 190-26213-A-1-C DU
Matrix: Solid
Analysis Batch: 518555

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 515451

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	-0.0803	U		0.03886	U	0.0870		0.151	pCi/g			1.09	2
Cesium-137	-0.0624	U		0.006551	U	0.0441		0.0819	pCi/g			2.04	2
Cobalt-60	0.0517	U		0.03011	U	0.0225		0.0375	pCi/g			0.88	2
Radium-226	0.163	U		0.04592	U	0.0405	0.200	0.252	pCi/g			1.99	2
Europium-152	0.138	U		0.1280		0.0794		0.0870	pCi/g			0.17	2
Europium-154	0.0343	U		0.06298	U	0.0378		0.0956	pCi/g			0.74	2
Europium-155	-0.120	U		0.04213	U	0.114		0.353	pCi/g			0.74	2

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
K-40	0.258	U		0.8735		0.424		0.379	pCi/g			1.52	2

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-42457-1
Project/Site: BNL Decommissioning Project

Rad

Leach Batch: 514768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	Dry and Grind	
160-42457-1 DU	BF-07-061621	Total/NA	Solid	Dry and Grind	

Prep Batch: 515451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	Fill_Geo-21	514768
MB 160-515451/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-515451/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
190-26213-A-1-C DU	Duplicate	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 518702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	DPS-7	514768
MB 160-518702/5-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-518702/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-42457-1 DU	BF-07-061621	Total/NA	Solid	DPS-7	514768

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-42457-1	BF-07-061621	79.2	102
160-42457-1 DU	BF-07-061621	73.9	100
LCS 160-518702/1-A	Lab Control Sample	86.0	104
MB 160-518702/5-A	Method Blank	88.3	97.9

Tracer/Carrier Legend

Sr = Sr Carrier

Y = Y Carrier

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	07/07/2021
Sample Receipt Date	06/18/2021
RJ Lee Group Job No.	AOH1062465-0
Authorization/P.O. No.	
Client Job No./Name	160-42457-1

Analysis: Asbestos in Bulk Samples by Point Count

Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10541233.HPL	BF-07-061621 (160-42457-1)	Yes	1	ND		100.00	Q, CA, OP, M	WT-07/06/2021

Description: Tan Rock.
400 Point Count. Detection Limit=0.25%.
NY ELAP Method 198.1.
No Asbestos Detected.

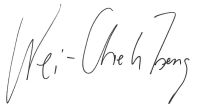
Weight Loss: 0.0%

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-42457-1 RJ Lee Group Job No: AOH1062465-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: 

Wei-Chieh Tseng, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-42457-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
7/31/2021 1:47:34 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

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www.eurofinsus.com/Env

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

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

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QC Association Summary 15

Job ID: 160-42457-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-42457-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The sample was received on 6/17/2021 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.7º C.

METALS ICP/MS

Sample BF-07-061621 (160-42457-1) was analyzed for Metals ICP/MS in accordance with SW 846. The samples were prepared and analyzed on 07/27/2021.

Job ID: 160-42457-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

MERCURY

Sample BF-07-061621 (160-42457-1) was analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 07/28/2021.

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

PERCENT SOLIDS

Sample BF-07-061621 (160-42457-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 07/14/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

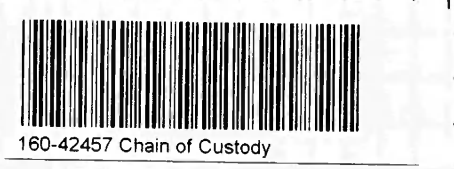
eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 6/16/21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: FedEX	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Sample Specific Notes:
BF-07-061621	16-Jun	15:00	C	S	2	N	N	1	1	1	1	1	Plastic Bag for Rad, Glass Jar for Chemical
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:6-16-21/15:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FE	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 6/17/21 0920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-214865.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42457-1
Address: 777 New Durham Road, ,	Due Date Requested: 7/28/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050B (MOD) NY Part 375 Analyte List	7471B/7471B_Prep	Moisture/ (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BF-07-061621 (160-42457-1)	6/16/21	15:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Winfrey	6/17/2021 17:00	ETA SRL	Adriano Via Fedex	6/18/21 1500	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.0°C/3.5°C

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42457-2

Login Number: 42457
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42457-2

Login Number: 42457
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 06/18/21 03:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-42457-2
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-2

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL EDI
7471B	Mercury (CVAA)	SW846	TAL EDI
Moisture	Percent Moisture	EPA	TAL EDI
3050B	Preparation, Metals	SW846	TAL EDI
7471B	Preparation, Mercury	SW846	TAL EDI

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42457-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-42457-1	BF-07-061621	Solid	06/16/21 15:00	06/17/21 09:20

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-42457-2
Project/Site: BNL Decommissioning Project

Client Sample ID: BF-07-061621
Lab Sample ID: 160-42457-1
Date Collected: 06/16/21 15:00
Matrix: Solid
Date Received: 06/17/21 09:20
Percent Solids: 97.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.4		0.62	0.21	mg/Kg	☼	07/27/21 02:40	07/27/21 14:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.041	H	0.016	0.0039	mg/Kg	☼	07/28/21 03:03	07/28/21 06:35	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 460-792716/1-A
Matrix: Solid
Analysis Batch: 792838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 792716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.60	0.20	mg/Kg		07/27/21 02:40	07/27/21 14:34	1

Lab Sample ID: LCSSRM 460-792716/2-A ^10
Matrix: Solid
Analysis Batch: 792838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 792716

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	56.7	61.6		mg/Kg		108.7	82.9 - 116.9

Lab Sample ID: 160-42457-1 MS
Matrix: Solid
Analysis Batch: 792838

Client Sample ID: BF-07-061621
Prep Type: Total/NA
Prep Batch: 792716

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	5.4		5.15	10.5		mg/Kg	☼	98	75 - 125

Lab Sample ID: 160-42457-1 DU
Matrix: Solid
Analysis Batch: 792838

Client Sample ID: BF-07-061621
Prep Type: Total/NA
Prep Batch: 792716

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	5.4		5.32		mg/Kg	☼	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-792929/10-A
Matrix: Solid
Analysis Batch: 793036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 792929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0040	mg/Kg		07/28/21 03:03	07/28/21 06:24	1

Lab Sample ID: LCSSRM 460-792929/11-A ^40
Matrix: Solid
Analysis Batch: 793036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 792929

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	16.5	16.3		mg/Kg		99.0	74.5 - 124.8

Lab Sample ID: 460-239392-C-5-C MS
Matrix: Solid
Analysis Batch: 793036

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 792929

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.025		0.0969	0.116		mg/Kg	☼	94	80 - 120

Client: FPM Remediations Inc
Job ID: 160-42457-2
Project/Site: BNL Decommissioning Project

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 460-239392-C-5-B DU
Matrix: Solid
Analysis Batch: 793036

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 792929

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.025			0.0275		mg/Kg	☼			11	20

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-42457-2
Project/Site: BNL Decommissioning Project

Metals

Prep Batch: 792716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	3050B	
MB 460-792716/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 460-792716/2-A ^1	Lab Control Sample	Total/NA	Solid	3050B	
160-42457-1 MS	BF-07-061621	Total/NA	Solid	3050B	
160-42457-1 DU	BF-07-061621	Total/NA	Solid	3050B	

Analysis Batch: 792838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	6020B	792716
MB 460-792716/1-A	Method Blank	Total/NA	Solid	6020B	792716
LCSSRM 460-792716/2-A ^1	Lab Control Sample	Total/NA	Solid	6020B	792716
160-42457-1 MS	BF-07-061621	Total/NA	Solid	6020B	792716
160-42457-1 DU	BF-07-061621	Total/NA	Solid	6020B	792716

Prep Batch: 792929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	7471B	
MB 460-792929/10-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 460-792929/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	
460-239392-C-5-C MS	Matrix Spike	Total/NA	Solid	7471B	
460-239392-C-5-B DU	Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 793036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	7471B	792929
MB 460-792929/10-A	Method Blank	Total/NA	Solid	7471B	792929
LCSSRM 460-792929/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	792929
460-239392-C-5-C MS	Matrix Spike	Total/NA	Solid	7471B	792929
460-239392-C-5-B DU	Duplicate	Total/NA	Solid	7471B	792929

General Chemistry

Analysis Batch: 790264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42457-1	BF-07-061621	Total/NA	Solid	Moisture	
460-238679-A-8 MS	Matrix Spike	Total/NA	Solid	Moisture	
460-238679-A-8 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
460-238640-A-9 DU	Duplicate	Total/NA	Solid	Moisture	

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41698-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
5/12/2021 6:36:06 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

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www.eurofinsus.com/Env

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

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

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QC Association Summary 14

Job ID: 160-41698-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41698-2

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

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

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

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

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

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Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The sample was received on 4/14/2021 9:05 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1º C.

METALS ICP/MS

Sample BF-03-041321 (160-41698-1) was analyzed for Metals ICP/MS in accordance with SW 846. The samples were prepared and analyzed on 05/10/2021.

Job ID: 160-41698-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

MERCURY

Sample BF-03-041321 (160-41698-1) was analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 05/10/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 04-13-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA 600-R-93	Lead (ICP/MS) - EPA 6020B	Mercury - EPA 7470A	Sample Specific Notes:
BF-03-041321	13-Apr	0:00	C	Soil	2	N	N	1	1	1	1	1	Plastic bag for rad, Glass jar for chemical
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____										1	1	1	

160-41698 Chain of Custody

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services, Inc.	Date/Time: 04-13-21 17:00	Received by: Fed Ex FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: EIA STL	Date/Time: 4/14/21 0905
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41698-2

Login Number: 41698
List Number: 1
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41698-2

Login Number: 41698
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 04/15/21 11:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41698-2
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-2

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL EDI
7471B	Mercury (CVAA)	SW846	TAL EDI
3050B	Preparation, Metals	SW846	TAL EDI
7471B	Preparation, Mercury	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41698-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41698-1	BF-03-041321	Solid	04/13/21 14:00	04/14/21 09:05	

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-41698-2
Project/Site: BNL Decommissioning Project

Client Sample ID: BF-03-041321
Lab Sample ID: 160-41698-1
Date Collected: 04/13/21 14:00
Matrix: Solid
Date Received: 04/14/21 09:05
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.8		0.59	0.20	mg/Kg	☼	05/10/21 05:26	05/10/21 18:02	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.036		0.016	0.0037	mg/Kg	☼	05/10/21 03:12	05/10/21 07:25	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 460-776854/1-A
Matrix: Solid
Analysis Batch: 776980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 776854

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.20	U	0.60	0.20	mg/Kg		05/10/21 05:26	05/10/21 16:37	1

Lab Sample ID: LCSSRM 460-776854/2-A
Matrix: Solid
Analysis Batch: 776980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 776854

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	77.6	76.5		mg/Kg		98.5	83.4 - 116.5

Lab Sample ID: 460-233549-A-8-H MS
Matrix: Solid
Analysis Batch: 776980

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 776854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40		5.63	48.8		mg/Kg	☼	159	75 - 125

Lab Sample ID: 460-233549-A-8-G DU
Matrix: Solid
Analysis Batch: 776980

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 776854

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	40		41.8		mg/Kg	☼	5	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-776827/10-A
Matrix: Solid
Analysis Batch: 776912

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 776827

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0040	U	0.017	0.0040	mg/Kg		05/10/21 03:12	05/10/21 07:13	1

Lab Sample ID: LCSSRM 460-776827/11-A ^40
Matrix: Solid
Analysis Batch: 776912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 776827

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	27.2	28.1		mg/Kg		103.3	72.4 - 127.6

Lab Sample ID: 460-233639-F-3-D MS
Matrix: Solid
Analysis Batch: 776912

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 776827

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.70		0.0799	0.475		mg/Kg	☼	-285	80 - 120

Client: FPM Remediations Inc
Job ID: 160-41698-2
Project/Site: BNL Decommissioning Project

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 460-233639-A-3-A DU
Matrix: Solid
Analysis Batch: 776912

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 776827

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.70			0.715		mg/Kg	☼			2	20

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-41698-2
Project/Site: BNL Decommissioning Project

Metals

Prep Batch: 776827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	7471B	
MB 460-776827/10-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 460-776827/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	
460-233639-F-3-D MS	Matrix Spike	Total/NA	Solid	7471B	
460-233639-A-3-A DU	Duplicate	Total/NA	Solid	7471B	

Prep Batch: 776854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	3050B	
MB 460-776854/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 460-776854/2-A	Lab Control Sample	Total/NA	Solid	3050B	
460-233549-A-8-H MS	Matrix Spike	Total/NA	Solid	3050B	
460-233549-A-8-G DU	Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 776912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	7471B	776827
MB 460-776827/10-A	Method Blank	Total/NA	Solid	7471B	776827
LCSSRM 460-776827/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	776827
460-233639-F-3-D MS	Matrix Spike	Total/NA	Solid	7471B	776827
460-233639-A-3-A DU	Duplicate	Total/NA	Solid	7471B	776827

Analysis Batch: 776980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41698-1	BF-03-041321	Total/NA	Solid	6020B	776854
MB 460-776854/1-A	Method Blank	Total/NA	Solid	6020B	776854
LCSSRM 460-776854/2-A	Lab Control Sample	Total/NA	Solid	6020B	776854
460-233549-A-8-H MS	Matrix Spike	Total/NA	Solid	6020B	776854
460-233549-A-8-G DU	Duplicate	Total/NA	Solid	6020B	776854

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-42005-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
6/8/2021 4:29:07 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-42005-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-42005-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The samples were received on 5/11/2021 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

METALS ICP/MS

Samples BF-05-051021 (160-42005-1) and BF-06-051021 (160-42005-2) were analyzed for Metals ICP/MS in accordance with SW 846. The samples were prepared on 06/06/2021 and analyzed on 06/07/2021.

Job ID: 160-42005-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Analytical Batch 460-782702:
Beryllium failed the recovery criteria high for the MS of sample 460-235779-2..

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**	COC No:
FPM	Email: d.ours@fpm-remediations.com	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**	Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS	**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days	Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks	Lab Sampling:
Site: BNL	☐ 1 week	
P O # 1085-20-01-01	☐ 2 days	Job / SDG No.:
	☐ 1 day	

Site Contact: Doug Beard **Date:**
Lab Contact: Ivan Vania **Carrier:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Sample Specific Notes:
BF-05-051021	10-May	15:00	C	S	2	N	N	1	1	1	1	1	Plastic Bag for Rad, Glass Jar for Chemical
BF-06-051021	10-May	15:00	C	S	2	N	N	1	1	1	1	1	
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						
						N	N						

160-42005 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:5-10-21/15:00	Received by:Fed Ex FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company:	Date/Time: 5/11/21 09:10
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 280-568503.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42005-2
Address: 777 New Durham Road, ,	Due Date Requested: 6/8/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050B NY Part 375 Analyte List	7471B/7471B_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
BF-05-051021 (160-42005-1)	5/10/21	15:00 Eastern		Solid			X	X	1	
BF-06-051021 (160-42005-2)	5/10/21	15:00 Eastern		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/14/21 1445		Jeanette via fedex	5/15/21 1030	E-TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.: 1213255	Cooler Temperature(s) °C and Other Remarks: 4.5°C / 4.0°C

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42005-2

Login Number: 42005
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42005-2

Login Number: 42005
List Number: 3
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 05/17/21 03:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1213255
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-42005-2
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
N	MS and/or MSD recovery exceeds control limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42005-2

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL EDI
7471B	Mercury (CVAA)	SW846	TAL EDI
3050B	Preparation, Metals	SW846	TAL EDI
7471B	Preparation, Mercury	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42005-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-42005-1	BF-05-051021	Solid	05/10/21 15:00	05/11/21 09:10	
160-42005-2	BF-06-051021	Solid	05/10/21 15:00	05/11/21 09:10	

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-42005-2
Project/Site: BNL Decommissioning Project

Client Sample ID: BF-05-051021
Lab Sample ID: 160-42005-1
Date Collected: 05/10/21 15:00
Matrix: Solid
Date Received: 05/11/21 09:10
Percent Solids: 97.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1		0.87	0.087	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Barium	7.2		1.7	0.13	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Beryllium	0.080	J	0.35	0.050	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Cadmium	0.098	U	0.87	0.098	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Chromium	3.3		1.7	0.15	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Copper	3.7		1.7	0.19	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Lead	8.2		0.52	0.17	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Manganese	46		3.5	0.35	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Nickel	2.1		1.7	0.17	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Selenium	0.10	U	1.1	0.10	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Silver	0.077	U	0.87	0.077	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1
Zinc	14		7.0	2.0	mg/Kg	☼	06/06/21 19:45	06/07/21 11:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.017	0.0040	mg/Kg	☼	06/07/21 03:22	06/07/21 07:43	1

Client Sample ID: BF-06-051021
Lab Sample ID: 160-42005-2
Date Collected: 05/10/21 15:00
Matrix: Solid
Date Received: 05/11/21 09:10
Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.98		0.86	0.086	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Barium	8.0		1.7	0.12	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Beryllium	0.081	J	0.34	0.049	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Cadmium	0.097	U	0.86	0.097	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Chromium	3.2		1.7	0.15	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Copper	3.9		1.7	0.19	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Lead	7.6		0.52	0.17	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Manganese	63		3.4	0.35	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Nickel	2.2		1.7	0.17	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Selenium	0.10	U	1.1	0.10	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Silver	0.076	U	0.86	0.076	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1
Zinc	14		6.9	2.0	mg/Kg	☼	06/06/21 19:45	06/07/21 11:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13		0.017	0.0040	mg/Kg	☼	06/07/21 03:22	06/07/21 07:45	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 460-782639/1-A
Matrix: Solid
Analysis Batch: 782702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 782639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.10	U	1.0	0.10	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Barium	0.15	U	2.0	0.15	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Beryllium	0.057	U	0.40	0.057	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Cadmium	0.11	U	1.0	0.11	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Chromium	0.17	U	2.0	0.17	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Copper	0.22	U	2.0	0.22	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Lead	0.20	U	0.60	0.20	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Manganese	0.40	U	4.0	0.40	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Nickel	0.19	U	2.0	0.19	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Selenium	0.12	U	1.3	0.12	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Silver	0.089	U	1.0	0.089	mg/Kg		06/06/21 19:45	06/07/21 08:52	1
Zinc	2.3	U	8.0	2.3	mg/Kg		06/06/21 19:45	06/07/21 08:52	1

Lab Sample ID: LCSSRM 460-782639/2-A ^5
Matrix: Solid
Analysis Batch: 782702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 782639

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	156	161		mg/Kg		103.3	82.7 - 117.3
Barium	239	255		mg/Kg		106.6	82.4 - 117.2
Beryllium	169	173		mg/Kg		102.1	83.4 - 117.2
Cadmium	137	138		mg/Kg		100.9	82.5 - 116.8
Chromium	154	156		mg/Kg		101.5	81.8 - 117.5
Copper	54.9	55.9		mg/Kg		101.9	84.0 - 115.8
Lead	130	138		mg/Kg		105.9	82.3 - 116.9
Manganese	269	288		mg/Kg		107.0	82.2 - 117.8
Nickel	53.9	57.4		mg/Kg		106.5	82.6 - 117.4
Selenium	167	181		mg/Kg		108.4	79.0 - 120.4
Silver	33.6	33.9		mg/Kg		100.8	79.8 - 119.9
Zinc	158	161		mg/Kg		102.2	81.0 - 119.0

Lab Sample ID: 460-235779-A-2-L MS
Matrix: Solid
Analysis Batch: 782702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 782639

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.2		8.57	13.7		mg/Kg	☼	98	75 - 125
Barium	170		8.57	175		mg/Kg	☼	100	75 - 125
Beryllium	0.64		4.29	6.78	N	mg/Kg	☼	143	75 - 125
Cadmium	0.44	J	4.29	4.86		mg/Kg	☼	103	75 - 125

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 460-235779-A-2-L MS
Matrix: Solid
Analysis Batch: 782702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 782639

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	170		8.57	216		mg/Kg	☼	526	75 - 125
Copper	120		8.57	144		mg/Kg	☼	283	75 - 125
Lead	210		4.29	333		mg/Kg	☼	2919	75 - 125
Nickel	23		8.57	33.2		mg/Kg	☼	119	75 - 125
Selenium	0.48	J	8.57	8.49		mg/Kg	☼	93	75 - 125
Silver	0.41	J	4.29	4.68		mg/Kg	☼	100	75 - 125
Zinc	240		42.9	424		mg/Kg	☼	418	75 - 125

Lab Sample ID: 460-235779-A-2-K DU
Matrix: Solid
Analysis Batch: 782702

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 782639

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.2		4.88		mg/Kg	☼	7	20
Barium	170		136		mg/Kg	☼	21	20
Beryllium	0.64		0.622		mg/Kg	☼	3	20
Cadmium	0.44	J	0.464	J	mg/Kg	☼	6	20
Chromium	170		135		mg/Kg	☼	24	20
Copper	120		123		mg/Kg	☼	2	20
Lead	210		235		mg/Kg	☼	12	20
Nickel	23		21.8		mg/Kg	☼	5	20
Selenium	0.48	J	0.466	J	mg/Kg	☼	3	20
Silver	0.41	J	0.348	J	mg/Kg	☼	17	20
Zinc	240		241		mg/Kg	☼	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-782646/1-A
Matrix: Solid
Analysis Batch: 782721

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 782646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0040	U	0.017	0.0040	mg/Kg		06/07/21 03:22	06/07/21 07:28	1

Lab Sample ID: LCSSRM 460-782646/2-A ^40
Matrix: Solid
Analysis Batch: 782721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 782646

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	20.5	20.3		mg/Kg		98.9	71.7 - 128.3

Lab Sample ID: 460-235254-B-4-A MS
Matrix: Solid
Analysis Batch: 782721

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 782646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.029		0.0903	0.114		mg/Kg	☼	95	80 - 120

Client: FPM Remediations Inc
Job ID: 160-42005-2
Project/Site: BNL Decommissioning Project

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 460-235254-A-4-K DU
Matrix: Solid
Analysis Batch: 782721

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 782646

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Mercury	0.029			0.0304		mg/Kg	☼			6	20

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-42005-2
Project/Site: BNL Decommissioning Project

Metals

Prep Batch: 782639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	3050B	
160-42005-2	BF-06-051021	Total/NA	Solid	3050B	
MB 460-782639/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 460-782639/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
460-235779-A-2-L MS	Matrix Spike	Total/NA	Solid	3050B	
460-235779-A-2-K DU	Duplicate	Total/NA	Solid	3050B	

Prep Batch: 782646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	7471B	
160-42005-2	BF-06-051021	Total/NA	Solid	7471B	
MB 460-782646/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 460-782646/2-A ^4	Lab Control Sample	Total/NA	Solid	7471B	
460-235254-B-4-A MS	Matrix Spike	Total/NA	Solid	7471B	
460-235254-A-4-K DU	Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 782702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	6020B	782639
160-42005-2	BF-06-051021	Total/NA	Solid	6020B	782639
MB 460-782639/1-A	Method Blank	Total/NA	Solid	6020B	782639
LCSSRM 460-782639/2-A ^5	Lab Control Sample	Total/NA	Solid	6020B	782639
460-235779-A-2-L MS	Matrix Spike	Total/NA	Solid	6020B	782639
460-235779-A-2-K DU	Duplicate	Total/NA	Solid	6020B	782639

Analysis Batch: 782721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42005-1	BF-05-051021	Total/NA	Solid	7471B	782646
160-42005-2	BF-06-051021	Total/NA	Solid	7471B	782646
MB 460-782646/1-A	Method Blank	Total/NA	Solid	7471B	782646
LCSSRM 460-782646/2-A ^4	Lab Control Sample	Total/NA	Solid	7471B	782646
460-235254-B-4-A MS	Matrix Spike	Total/NA	Solid	7471B	782646
460-235254-A-4-K DU	Duplicate	Total/NA	Solid	7471B	782646

A-5
Imported Backfill

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-10-2021** Time of Call: **1050** Driver's Name: **JIMMY POPP**

Time of Response: **1110**

Tractor Lic **NY 29268-TC**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other License No. **NY BT-12339**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**5**	
BKDG= 4-5 µR/hr.		
FPM RECLAMATION: JAKE'S CELL #315-725-0610		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-10-2021** Time of Call: **1335** Driver's Name: **JOHN HINCHY**

Time of Response: **1335**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic License No. **NY 61798-PC** **NY BT-72124**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**6**	
BKDG= 4-5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-10-2021** Time of Call: **1414** Driver's Name: **JIMMY POPP**

Time of Response: **1414**

Type of Vehicle: [ ] Garbage [X] Dump [ ] Pick-Up [ ] Other

Tractor Lic **NY 29268-TC**

License No. **NY BT-12339**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**5**	
BKDG= 4-5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-10-2021** Time of Call: **1513** Driver's Name: **JOHN HINCHY**

Time of Response: **1513**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other Tractor Lic **NY 61798-PC** License No. **BT-72124**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**6**	
BKDG= 4-5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1109** Driver's Name: **JAMES MARTO**

Time of Response: **1109**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other Tractor Lic License No. **NY 20566TC BT 12343**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**5**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1224** Driver's Name: **JOHN HINCHY**

Time of Response: **1227**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 61798-PC**

License No. **NY BT-72124**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750 STACK PROJECT	**6**	
BKDG = 5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

Attachment 9.2

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1245** Driver's Name: **JAMES MARTO**

Time of Response: **1245**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other Tractor Lic License No. **NY 20566TC BT 12343**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**5**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1331** Driver's Name: **JONATHAN WULFORST**

Time of Response: **1331**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other Tractor Lic License No. **NY 61792PC** **AS 89931**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**5**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

Attachment 9.2

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1406** Driver's Name: **JOHN HINCHY**

Time of Response: **1406**

Type of Vehicle: [ ] Garbage [X] Dump [ ] Pick-Up [ ] Other

Tractor Lic **NY 61798-PC**

License No. **NY BT-72124**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750 STACK PROJECT	**6**	
BKDG = 5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-15-2021** Time of Call: **1524** Driver's Name: **JAMES LEHN**

Time of Response: **1524**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 61794PC**

License No. **BA 16069**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**6**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **0939** Driver's Name: **JIMMY POPP**

Time of Response: **0939**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 29268-TC**

License No. **NY BT-12339**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**5**	
BKDG=5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **0959** Driver's Name: **JAMES MARTO**

Time of Response: **0959**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 20566TC**
License No. **BT 12343**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**5**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **1114** Driver's Name: **JIMMY POPP**

Time of Response: **1114**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 29268-TC**

License No. **NY BT-12339**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**5**	
BKDG=5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **1139** Driver's Name: **JAMES MARTO**

Time of Response: **1139**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 20566TC**

License No. **BT 12343**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN FILL SOIL FOR B750 STACK PROJECT	**5**	

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

Comments:

BACKGROUND = 5µR/hr.

INSTRUMENT: Ludlum #19, s/n 73465, Cal Due 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **1453** Driver's Name: **JOSE MENDEZ**

Time of Response: **1453**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 15081PF**

License No. **NY AA-70059**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750	**6**	
BKDG=5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

VEHICLE RADIATION MONITOR ALARM RESPONSE REPORT

Date: **09-17-2021** Time of Call: **1500** Driver's Name: **JOHN HINCHY**

Time of Response: **1500**

Type of Vehicle: ☐ Garbage ☒ Dump ☐ Pick-Up ☐ Other

Tractor Lic **NY 61798-PC**

License No. **NY BT-72124**

Description of Radioactive Material Found / Reason for Alarm	µR/hr contact	cpm
INCOMING CLEAN "SELECT" FILL FOR B750 STACK PROJECT	**6**	
BKDG = 5 µR/hr.		

Building where material originated: **OFFSITE: WESTHAMPTON PROPERTIES SPEONK, NY**

FS Representative Contacted: **C. BURNS**

Name (Responding RCT): **KIM MCGILL**

INSTRUMENT: Lud#19 s/n 73465 CDD 08/10/2022

Vehicle Radiation Monitor, Use of the Subject Area

Radiological Control Management System

Effective Date: January 27, 2020
Last Reviewed: January 27, 2020
Next Periodic Review: January 27, 2023

MS Steward: Steven Coleman
MS Executive: Nate Foster
Subject Matter Expert: Nate Foster

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OFFICIAL USE ONLY

Introduction

This subject area describes how Brookhaven National Laboratory (BNL) staff and non-BNL staff who use conveyances to transport material that has the potential to be radioactively contaminated or activated to off-site locations, or perform on-site transfers of scrap metals, electronics, and Construction-Demolition (C&D) debris, must use the vehicle radiation monitor (VRM) as a final check before proceeding to their final destination.

The VRM at BNL is a series of permanently placed gamma radiation detectors that are operating in a static mode. This unit has the capability to differentiate between radioactivity added and natural background radiation. It also has real-time video and picture-taking capabilities. It offers a two dimensional view of the conveyance to aid the responding Facility Support (FS) personnel in locating the proximity of the radioactive material alarm.

This system operates as a "go/no go" unit, it is not intended to replace or be used in lieu of a radiological survey. Prior to going through the VRM, all suspect material leaving a Radiological Area must be surveyed and documented by FS personnel in accordance with 10 CFR 835 and DOE O 458.1.

The driver must follow the posted instructions at the VRM prior to proceeding through. If a driver is unsure how to properly use the VRM, they should contact FS personnel for assistance.

This subject area contains the following sections:

1. Delivery of Material to the Clean Scrap Metal Yard
2. Pickup of Clean Scrap Metal by Outside Vendor
3. Disposition of Salvage Material and Excess Warehouse Material
4. Release of Municipal Solid Waste/Industrial Waste Off-site.

This subject area does not cover the following:

This subject area does not apply to delivery trucks/conveyances such as, but not limited to, trucks delivering supplies and materials to BNL, United States Postal Service, United Parcel Service, DHL, FedEx, food delivery trucks, etc. This subject area also does not apply to radioactive waste shipments.

References

Management of Moratorium and Suspension Encumbered Metals Subject Area

Waste Subject Area

Standards of Performance

All staff and users shall ensure that they are trained and qualified to carry out their assigned responsibilities, and shall inform their supervisor if they are assigned to perform work for which they are not properly trained or qualified.

All staff and guests shall exercise effective stewardship of assets in their custody and control, and shall take reasonable actions to safeguard all assets against theft, loss, misuse, and disruption.

All staff and guests shall assure that only appropriately authorized individuals have access to facilities, information, resources, and assets.

The Laboratory's policies, standards, and Laboratory-wide procedures and guidelines are based on an evaluation of external requirements documents and applicable non-government standards, e.g., orders, directives, and federal, state, and local laws.

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Vehicle Radiation Monitor, Use of the Subject Area

Radiological Control Management System

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Procedure:

1. Delivery of Material to the Clean Scrap Metal Yard

Required Procedure

Applicability

This section applies to BNL and non-BNL delivery of material to the Clean Scrap Yard. This section is also applicable to outside vendors who pick up Clean Scrap Metal for off-site disposition.

Required Procedure

1. Prior to pick up, a Process Knowledge Form (PKF) for Clean and Suspension Encumbered Metals from the Management of Moratorium and Suspension Encumbered Metals Subject Area for material must be completed.
2. Proceed to the vehicle radiation monitor (VRM) for final survey. Read the posted Instructions prior to going through the VRM. If you do not understand the Instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
3. Upon going through the VRM, you will either see a green light indicating a successful pass or you will see a red indication light with an audible alarm, this indicates an unsuccessful pass. For the successful pass, you will then be prompted to take a "clean" ticket. For the unsuccessful pass, you are required to notify FS personnel. **Do not leave the area.**
4. If the VRM is out of service, contact FS personnel for final survey and a clean survey form.
5. With a "clean" ticket in hand, proceed to the Scrap Yard.
6. At the Scrap Yard, you will hand Procurement & Property Management (PPM) personnel the completed PKF and the "clean" VRM ticket or a VRM Clean Survey Form.

References

Management of Moratorium and Suspension Encumbered Metals Subject Area

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Procedure:

2. Pickup of Clean Scrap Metal by Outside Vendor

Required Procedure

Applicability

This section applies to Outside Vendors who pick up Clean Scrap Metal for off-site disposition. See the Waste Subject Area for more information regarding this waste stream.

Required Procedure

1. Driver must proceed to the vehicle radiation monitor (VRM) for a survey of empty container(s).
2. Read the posted Instructions prior to going through the VRM. If you do not understand the Instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
3. After passing through the VRM you will receive one of two indications, a "green" light indicates a clean passage, if this occurs, continue to the next step. If you receive a "red" light, this indicates a failed passage; you will also get an audible alarm. In this case contact FS personnel. **Do not leave the VRM area.**
4. If the VRM is out of service, contact FS personnel for initial survey of empty container(s) and obtain a VRM Clean Survey Form.
5. Proceed to the Weigh Station for weight of empty container(s).
6. Proceed to Clean Scrap Metal Yard.
7. Hand over the “clean” VRM ticket or VRM Clean Survey Form and the scale ticket to PPM personnel.
8. PPM personnel will load container(s) with Clean Scrap Metal.
9. Proceed to VRM for final survey.
10. After passing through the VRM you will receive one of two indications, a "green" light indicates a clean passage, if this occurs, continue to the Main Gate to exit the Lab property. If you receive a "red" light, this

indicates a failed passage; you will also get an audible alarm. In this case contact FS personnel. **Do not leave the VRM area.**

11. If the VRM is out of service, contact FS personnel for the survey of the full container(s) and obtain a VRM Clean Survey Form.
12. Proceed to the weigh station for weight of the full container(s).
13. Hand over the "clean" VRM ticket or VRM Clean Survey Form to PPM personnel.

References

Waste Subject Area

OFFICIAL USE ONLY

Vehicle Radiation Monitor, Use of the Subject Area

Radiological Control Management System

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Procedure:

3. Disposition of Salvage Material and Excess Warehouse Material

Required Procedure

Applicability

This section applies to BNL personnel and non-BNL personnel who transfer Salvage Material and excess Warehouse Material for disposal. See the Waste Subject Area for more information on these waste streams.

Required Procedure

1. Proceed to the vehicle radiation monitor (VRM) for final survey. Read the posted instructions prior to going through the VRM. If you do not understand the instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
2. Upon going through the VRM, you will either see a green light indicating a successful pass or a red indication light with an audible alarm, which indicates an unsuccessful pass. For the successful pass, you will then be prompted to take a "clean" ticket. For the unsuccessful pass, you are required to notify FS personnel. **Do not leave the area.**
3. If the VRM is out of service, contact FS personnel for final survey and a clean survey form.
4. Upon a successful pass, proceed to the appropriate location for disposition of material.
5. At the designated location, turn in the "clean" VRM ticket or a VRM Clean Survey Form to PPM personnel.

References

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Procedure:

4. Release of Municipal Solid Waste/Industrial Waste Off-site

Required Procedure

Applicability

This section applies to BNL personnel who transfer Municipal Solid Waste off-site. See the Waste Subject Area for more information regarding this waste stream.

Required Procedure

1. Proceed to vehicle radiation monitor (VRM) for final survey.
2. Read the posted instructions prior to going through the VRM. If you do not understand the instructions, call Facility Support (FS) personnel for assistance. **Do not proceed.**
3. After passing through the VRM you will receive one of two indications. A "green" light indicates a clean passage; if this occurs, continue to the Main Gate to exit the Lab property. If you receive a "red" light, this indicates a failed passage; you will also get an audible alarm. In this case, contact FS personnel and do not leave the VRM area.
4. If VRM is out of service, contact FS personnel for final survey.

References

Waste Subject Area

Vehicle Radiation Monitor, Use of the Subject Area

Radiological Control Management System

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Training

This subject area does not contain training requirements.

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Terms & Definitions

Term	Definition
None	None

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Radiological Control Management System

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Subject Matter Expert:

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Departmental Procedures

- Radiological Control Division - FS Standard Operating Procedures - Vehicle Radiation Monitor Procedure FS-SOP-0002 (doc)

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Imported Backfill Analyitcal Summary
HFBR Stack Decommissioning and Demolition, Brookhaven National Laboratory

			Sample ID	BF-08-072721	S-1 COMP	S-1 VOC	S-2 COMP	S-2 VOC
			Lab Sample ID	160-42911-1	21H0697-01	21H0697-02	21H0697-03	21H0697-03
			Collection Date	7/27/2021	8/13/2021	8/13/2021	8/13/2021	8/13/2021
Chemical Name	Unrestricted SCO [1]	Unit		Result	Result	Result	Result	Result
VOCs by Method SW8260C								
1,1,1-Trichloroethane	680	ug/kg		<0.32	NA	<2.6	NA	<2.7
1,1-Dichloroethane	270	ug/kg		<0.38	NA	<2.6	NA	<2.7
1,1-Dichloroethene	330	ug/kg		<0.26	NA	<2.6	NA	<2.7
1,2,4-Trimethylbenzene	3600	ug/kg		<1.3	NA	<2.6	NA	<2.7
1,2-Dichlorobenzene	1100	ug/kg		<0.45	NA	<2.6	NA	<2.7
1,2-Dichloroethane	20	ug/kg		<0.38	NA	<2.6	NA	<2.7
1,3,5-Trimethylbenzene	8400	ug/kg		<0.6	NA	<2.6	NA	<2.7
1,3-Dichlorobenzene	2400	ug/kg		<0.39	NA	<2.6	NA	<2.7
1,4-Dichlorobenzene	1800	ug/kg		<0.46	NA	<2.6	NA	<2.7
1,4-Dioxane	100	ug/kg		<8.0	NA	<52	NA	<2.7
Acetone	50	ug/kg		<26	NA	<5.2	NA	<2.7
Benzene	60	ug/kg		<0.18	NA	<2.6	NA	<2.7
Carbon Tetrachloride	760	ug/kg		<0.13	NA	<2.6	NA	<2.7
Chlorobenzene	1100	ug/kg		<0.14	NA	<2.6	NA	<2.7
Chloroform	370	ug/kg		<0.32	NA	<2.6	NA	<2.7
cis-1,2-Dichloroethene	250	ug/kg		<0.41	NA	<2.6	NA	<2.7
Ethylbenzene	1000	ug/kg		<0.44	NA	<2.6	NA	<2.7
m,p-Xylenes	260	ug/kg		<0.48	NA	<5.2	NA	<2.7
Methyl Ethyl Ketone (2-Butanone)	120	ug/kg		<6.1	NA	<2.6	NA	<2.7
Methylene Chloride	50	ug/kg		**0.76 J H B**	NA	**11**	NA	**9.6 J**
Methyl-tert-Butyl Ether	930	ug/kg		<0.17	NA	<2.6	NA	<2.7
n-Butylbenzene	120	ug/kg		<0.48	NA	<2.6	NA	<2.7
n-Propylbenzene	3900	ug/kg		<0.45	NA	<2.6	NA	<2.7
o-Xylene	260	ug/kg		<0.48	NA	<2.6	NA	<2.7
sec-Butylbenzene	11000	ug/kg		<0.50	NA	<2.6	NA	<2.7
tert-Butylbenzene	5900	ug/kg		<0.44	NA	<2.6	NA	<2.7
Tetrachloroethene	1300	ug/kg		<0.17	NA	<2.6	NA	<2.7
Toluene	700	ug/kg		<0.61	NA	<2.6	NA	<2.7
trans-1,2-Dichloroethene	190	ug/kg		<0.37	NA	<2.6	NA	<2.7
Trichloroethene	470	ug/kg		<0.33	NA	<2.6	NA	<2.7
Vinyl chloride	20	ug/kg		<0.49	NA	<2.6	NA	<2.7

Imported Backfill Analyitcal Summary
HFBR Stack Decommissioning and Demolition, Brookhaven National Laboratory

		Sample ID	BF-08-072721	S-1 COMP	S-1 VOC	S-2 COMP	S-2 VOC
		Lab Sample ID	160-42911-1	21H0697-01	21H0697-02	21H0697-03	21H0697-03
		Collection Date	7/27/2021	8/13/2021	8/13/2021	8/13/2021	8/13/2021
Chemical Name	Unrestricted SCO [1]	Unit	Result	Result	Result	Result	Result
SVOCs by Method SW8270D							
2-Methylphenol	--	ug/kg	<14	<43.4	NA	<44.2	NA
3/4-Methylphenol	--	ug/kg	<35	<43.4	NA	<44.2	NA
Acenaphthene	20000	ug/kg	**73 J**	<43.4	NA	**78.3**	NA
Acenaphthylene	100000	ug/kg	<88	<43.4	NA	<44.2	NA
Anthracene	100000	ug/kg	**110 J**	<43.4	NA	**176**	NA
Benzo(a)anthracene	1000	ug/kg	**310 J**	**95.5**	NA	**335**	NA
Benzo(a)pyrene	1000	ug/kg	**320 J**	**113**	NA	**299**	NA
Benzo(b)fluoranthene	1000	ug/kg	**380**	**97.5**	NA	**254**	NA
Benzo(g,h,i)perylene	100000	ug/kg	**210 J**	**74.7 J**	NA	**197**	NA
Benzo(k)fluoranthene	800	ug/kg	**150 J**	**94.1**	NA	**243**	NA
Chrysene	1000	ug/kg	**310 J**	**89.9**	NA	**328**	NA
Dibenz(a,h)anthracene	330	ug/kg	**47 J**	<43.4	NA	**58.6**	NA
Dibenzofuran	--	ug/kg	**30 J**	<43.4	NA	**69.9**	NA
Fluoranthene	100000	ug/kg	**710**	**154**	NA	**746**	NA
Fluorene	30000	ug/kg	**48 J**	<43.4	NA	**94.6**	NA
Hexachlorobenzene	--	ug/kg	<31	<43.4	NA	<44.2	NA
Indeno(1,2,3-cd)pyrene	500	ug/kg	**260 J**	**90.6**	NA	**242**	NA
Naphthalene	12000	ug/kg	<33	<43.4	NA	**54.3**	NA
Pentachlorophenol	800	ug/kg	<350	<43.4	NA	**661**	NA
Phenanthrene	100000	ug/kg	**530 F1**	**66.4**	NA	<44.2	NA
Phenol	330	ug/kg	<19	<43.4	NA	<44.2	NA
Pyrene	100000	ug/kg	<13	**151**	NA	**667**	NA
Pesticides by Method SW8081B							
4,4'-DDD	3.3	ug/kg	<1.3	<1.61	NA	<1.64	NA
4,4'-DDE	3.3	ug/kg	<0.92	<1.61	NA	<1.64	NA
4,4'-DDT	3.3	ug/kg	**3.1 J**	<1.61	NA	<1.64	NA
Aldrin	5	ug/kg	<1.2	<1.61	NA	<1.64	NA
alpha-BHC	20	ug/kg	<0.79	<1.61	NA	<1.64	NA
beta-BHC	36	ug/kg	<0.87	<1.61	NA	<1.64	NA
alpha-Chordane	94	ug/kg	**4.6 J**	**11.8**	NA	**13.1**	NA
gamma-Chlordane	--	ug/kg	**4.7 J**	<1.61	NA	<1.64	NA
delta-BHC	40	ug/kg	<0.48	<1.61	NA	<1.64	NA
Dieldrin	5	ug/kg	<1.0	<1.61	NA	<1.64	NA
Endosulfan I	2400	ug/kg	<1.2	<1.61	NA	<1.64	NA
Endosulfan II	2400	ug/kg	<2.0	<1.61	NA	<1.64	NA
Endosulfan Sulfate	2400	ug/kg	<0.98	<1.61	NA	<1.64	NA
Endrin	14	ug/kg	<1.1	<1.61	NA	<1.64	NA
gamma-BHC	--	ug/kg	<0.72	<1.61	NA	<1.64	NA
Heptachlor	42	ug/kg	<0.92	<1.61	NA	<1.64	NA
Heptachlor epoxide	--	ug/kg	<1.2	<1.61	NA	<1.64	NA
Methoxychlor	--	ug/kg	<1.8	<1.61	NA	<1.64	NA
Toxaphene	--	ug/kg	<28	<1.61	NA	<1.64	NA

Imported Backfill Analyitcal Summary
HFBR Stack Decommissioning and Demolition, Brookhaven National Laboratory

			Sample ID	BF-08-072721	S-1 COMP	S-1 VOC	S-2 COMP	S-2 VOC
			Lab Sample ID	160-42911-1	21H0697-01	21H0697-02	21H0697-03	21H0697-03
			Collection Date	7/27/2021	8/13/2021	8/13/2021	8/13/2021	8/13/2021
Chemical Name	Unrestricted SCO [1]	Unit		Result	Result	Result	Result	Result
PCB Arolclor by Method SW8082A								
Aroclor-1016	100	ug/kg		<10	<17	NA	<17.9	NA
Aroclor-1221	100	ug/kg		<10	<17	NA	<17.9	NA
Aroclor-1232	100	ug/kg		<10	<17	NA	<17.9	NA
Aroclor-1242	100	ug/kg		<10	<17	NA	<17.9	NA
Aroclor-1248	100	ug/kg		<10	<17	NA	<17.9	NA
Aroclor-1254	100	ug/kg		<11	<17	NA	<17.9	NA
Aroclor-1260	100	ug/kg		<11	<17	NA	<17.9	NA
Aroclor-1262	100	ug/kg		<11	<17	NA	<17.9	NA
Aroclor-1268	100	ug/kg		<11	<17	NA	<17.9	NA
Herbicide by Method SW8151A								
2,4,5-TP (Silvex)	--	ug/kg		<4.0	<20.8	NA	<21.4	NA
Metals by Methods SW6010C & SW7471B								
Arsenic	13	mg/kg		**3.8**	2.93	NA	**2.88**	NA
Barium	350	mg/Kg		**30**	41.2	NA	**54.2**	NA
Beryllium	7.2	mg/kg		**0.29 J**	<0.052	NA	<0.054	NA
Cadmium	2.5	mg/kg		<1.1	<0.313	NA	<0.324	NA
Chromium	30	mg/kg		**23**	12.8	NA	**19.2**	NA
Copper	50	mg/kg		**13**	21.4	NA	**27.9**	NA
Lead	63	mg/kg		**23**	23.9	NA	**26.3**	NA
Manganese	1600	mg/kg		**180**	202	NA	**160**	NA
Nickel	30	mg/kg		**9.3**	11.4	NA	**12.5**	NA
Selenium	3.9	mg/kg		**0.24 J**	<2.61	NA	<2.7	NA
Silver	2	mg/kg		<0.098	<0.522	NA	<0.54	NA
Zinc	109	mg/kg		**33**	34.1	NA	**133**	NA
Hexavalent Chromium	1	mg/kg		<1.0	<0.522	NA	**2.16**	NA
Mercury	0.18	mg/kg		**0.048**	**0.0545**	NA	**0.0609**	NA
Cyanide by Method 9014								
Cyanide	27	mg/kg		**<0.13**	<0.522	NA	**0.896**	NA

Notes:

[1] 6 NYCRR Part 375 Table 375-6.8(a) Unrestricted Use Soil Cleanup Objectives

Imported Backfill Analytical Summary
HFBR Stack Demolition and Decommissioning, Brookhaven National Laboratory

	Sample ID	BF-08-072721	
	Lab Sample ID	160-42911-1	
	Collection Date	7/27/2021	
Chemical Name	Unrestricted SCO [1]	**Unit**	**Composite**
PFAS by Method 537.1			
PFBA	--	ug/kg	<0.046
PFPeA	--	ug/kg	**0.045 J**
PFBS	--	ug/kg	<0.038
PFHxA	--	ug/kg	**0.040 J**
PFHpA	--	ug/kg	**0.064 J**
PFHxS	--	ug/kg	**0.051 J I**
PFOA	0.66	ug/kg	**0.012 J**
6:2FTS	--	ug/kg	<0.027
PFHpS	--	ug/kg	<0.049
PFNA	--	ug/kg	**0.059 J**
PFOS	0.88	ug/kg	**0.40**
PFDA	--	ug/kg	**0.084 J**
8:2FTS	--	ug/kg	<0.035
NMeFOSAA	--	ug/kg	<0.023
PFUnA	--	ug/kg	**0.045 J**
PFDS	--	ug/kg	<0.052
FOSA	--	ug/kg	<0.033
NEtFOSAA	--	ug/kg	<0.048
PFDoA	--	ug/kg	**0.032 J**
PFTeA	--	ug/kg	<0.037

Notes:

[1] Per Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (June 2021)

-- - No guidance value is established for this compound.

Boldface results were detected above the reporting limit.

ug/kg = micrograms per kilogram

B = Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.

J = Estimated quantitation between the quantitation limit and half the quantitiation limit.

M = Manual integrated compound.

Q = One or more quality control criteria failed.

U = Not detected.

Technical Report

prepared for:

East Coast Consulting & Testing LLC
24 Centre View Dr.
Oyster Bay NY, 11771
Attention: Anthony J. Franco

Report Date: 08/19/2021
Client Project ID: 1222 Speonk River Rd. West Hampton NY Prop.
York Project (SDG) No.: 21H0697

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 08/19/2021
Client Project ID: 1222 Speonk River Rd. West Hampton NY Prop.
York Project (SDG) No.: 21H0697

East Coast Consulting & Testing LLC
24 Centre View Dr.
Oyster Bay NY, 11771
Attention: Anthony J. Franco

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on August 13, 2021 and listed below. The project was identified as your project: **1222 Speonk River Rd. West Hampton NY Prop.**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
21H0697-01	S-1 Comp Select Fill	Soil	08/13/2021	08/13/2021
21H0697-02	S-1 Voc	Soil	08/13/2021	08/13/2021
21H0697-03	S-2 Comp RCA	Soil	08/13/2021	08/13/2021
21H0697-04	S-2 Voc	Soil	08/13/2021	08/13/2021

General Notes for York Project (SDG) No.: 21H0697

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:  **Date:** 08/19/2021

Cassie L. Mosher
Laboratory Manager

Sample Information

Client Sample ID: S-1 Comp Select Fill

York Sample ID: 21H0697-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-48-7	2-Methylphenol	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
83-32-9	Acenaphthene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
120-12-7	Anthracene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
56-55-3	**Benzo(a)anthracene**	**95.5**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
50-32-8	**Benzo(a)pyrene**	**113**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
205-99-2	**Benzo(b)fluoranthene**	**97.5**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
191-24-2	**Benzo(g,h,i)perylene**	**74.7**	J	ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
207-08-9	**Benzo(k)fluoranthene**	**94.1**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
218-01-9	**Chrysene**	**89.9**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
132-64-9	Dibenzofuran	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
206-44-0	**Fluoranthene**	**154**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
86-73-7	Fluorene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 NELAC-NY10854,NJDEP,PADEP	KH
118-74-1	Hexachlorobenzene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
193-39-5	**Indeno(1,2,3-cd)pyrene**	**90.6**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
91-20-3	Naphthalene	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
87-86-5	Pentachlorophenol	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
85-01-8	**Phenanthrene**	**66.4**	J	ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
108-95-2	Phenol	ND		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH
129-00-0	**Pyrene**	**151**		ug/kg dry	43.4	86.5	2	EPA 8270D Certifications:	08/17/2021 07:39	08/18/2021 04:09 CTDOH,NELAC-NY10854,NJDEP,PADEP	KH

Sample Information

Client Sample ID: S-1 Comp Select Fill

York Sample ID: 21H0697-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**		**Acceptance Range**							
367-12-4	*Surrogate: SURR: 2-Fluorophenol*	*79.9 %*		*20-108*							
4165-62-2	*Surrogate: SURR: Phenol-d5*	*72.3 %*		*23-114*							
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*95.8 %*		*22-108*							
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*84.2 %*		*21-113*							
118-79-6	*Surrogate: SURR: 2,4,6-Tribromophenol*	*132 %*	S-08	*19-110*							
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*93.4 %*		*24-116*							

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
72-55-9	4,4'-DDE	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
50-29-3	4,4'-DDT	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
309-00-2	Aldrin	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
319-84-6	alpha-BHC	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
5103-71-9	**alpha-Chlordane**	**11.8**		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 NELAC-NY10854,NJDEP	08/18/2021 00:39	CM
319-85-7	beta-BHC	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
319-86-8	delta-BHC	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
60-57-1	Dieldrin	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
959-98-8	Endosulfan I	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
33213-65-9	Endosulfan II	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854	08/18/2021 00:39	CM
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
72-20-8	Endrin	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
76-44-8	Heptachlor	ND		ug/kg dry	1.61	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 00:39	CM
	Surrogate Recoveries	**Result**		**Acceptance Range**						

Sample Information

Client Sample ID: S-1 Comp Select Fill

York Sample ID: 21H0697-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
2051-24-3	*Surrogate: Decachlorobiphenyl*	*55.1 %*			*30-150*					
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*78.8 %*			*30-150*					

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:17	BJ
1336-36-3	* Total PCBs	ND		mg/kg dry	0.0170	1	EPA 8082A Certifications:	08/16/2021 12:49	08/17/2021 22:17	BJ

CAS No.	Surrogate Recoveries	Result	Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*73.0 %*	*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*39.5 %*	*30-140*

Herbicides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C/8151A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
93-72-1	2,4,5-TP (Silvex)	ND		ug/kg dry	20.8	1	EPA 8151A Certifications:	08/18/2021 16:08 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/19/2021 17:31	BJ

CAS No.	Surrogate Recoveries	Result	Acceptance Range
19719-28-9	*Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)*	*90.6 %*	*21-150*

Metals, NYSDEC Part 375

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst

Sample Information

Client Sample ID: **S-1 Comp Select Fill** **York Sample ID:** **21H0697-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Metals, NYSDEC Part 375

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**2.93**		mg/kg dry	1.57	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-39-3	**Barium**	**41.2**		mg/kg dry	2.61	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-41-7	Beryllium	ND		mg/kg dry	0.052	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-43-9	Cadmium	ND		mg/kg dry	0.313	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-47-3	**Chromium**	**12.8**		mg/kg dry	0.522	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-50-8	**Copper**	**21.4**		mg/kg dry	2.09	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-92-1	**Lead**	**23.9**		mg/kg dry	0.522	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7439-96-5	**Manganese**	**202**		mg/kg dry	0.522	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-02-0	**Nickel**	**11.4**		mg/kg dry	1.04	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7782-49-2	Selenium	ND		mg/kg dry	2.61	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-22-4	Silver	ND		mg/kg dry	0.522	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
7440-66-6	**Zinc**	**34.1**		mg/kg dry	2.61	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:46	EM
							Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Mercury by 7473

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	**Mercury**	**0.0545**		mg/kg dry	0.0313	1	EPA 7473	08/19/2021 08:33	08/19/2021 12:36	BR
							Certifications:	CTDOH,NJDEP,NELAC-NY10854,PADEP		

Chromium, Hexavalent

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	Chromium, Hexavalent	ND		mg/kg dry	0.522	1	EPA 7196A	08/17/2021 08:14	08/17/2021 16:13	JAG
							Certifications:	NJDEP,CTDOH,NELAC-NY10854,PADEP		

Chromium, Trivalent

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: S-1 Comp Select Fill **York Sample ID:** 21H0697-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	*** Chromium, Trivalent**	**12.8**		mg/kg	0.500	1	Calculation	08/19/2021 12:53	08/19/2021 13:03	PAM
							Certifications:			

Cyanide, Total **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	Cyanide, total	ND		mg/kg dry	0.522	1	EPA 9014/9010C	08/16/2021 07:41	08/16/2021 15:14	JAG
							Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP			

Total Solids **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**95.7**		%	0.100	1	SM 2540G	08/18/2021 12:49	08/18/2021 18:12	VR
							Certifications: CTDOH			

Sample Information

Client Sample ID: S-1 Voc **York Sample ID:** 21H0697-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Volatile Organics, NYSDEC Part 375 List **Log-in Notes:** VOA-CONT **Sample Notes:** **VOA-CONT**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:03	OC
								Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP			

Sample Information

Client Sample ID: S-1 Voc

York Sample ID: 21H0697-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: VOA-CONT **Sample Notes:** VOA-CONT

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
123-91-1	1,4-Dioxane	ND		ug/kg dry	52	100	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
78-93-3	2-Butanone	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
67-64-1	Acetone	ND		ug/kg dry	5.2	10	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
71-43-2	Benzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
108-90-7	Chlorobenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
67-66-3	Chloroform	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
75-09-2	**Methylene chloride**	**11**		ug/kg dry	5.2	10	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
91-20-3	Naphthalene	ND		ug/kg dry	2.6	10	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
95-47-6	o-Xylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	OC
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	5.2	10	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	OC
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
108-88-3	Toluene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC
79-01-6	Trichloroethylene	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00	08/18/2021 16:03 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	OC

Sample Information

Client Sample ID: S-1 Voc **York Sample ID:** 21H0697-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: VOA-CONT **Sample Notes:** VOA-CONT

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.6	5.2	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:03	OC
1330-20-7	Xylenes, Total	ND		ug/kg dry	7.8	16	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP	08/18/2021 16:03	OC

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*102 %*	*77-125*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*102 %*	*85-120*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*108 %*	*76-130*

Total Solids

Log-in Notes: VOA-CONT **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**95.6**		%	0.100	1	SM 2540G Certifications: CTDOH	08/18/2021 12:49	08/18/2021 18:12	VR

Sample Information

Client Sample ID: S-2 Comp RCA **York Sample ID:** 21H0697-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-48-7	2-Methylphenol	ND		ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH
83-32-9	**Acenaphthene**	**78.3**	J	ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH
208-96-8	Acenaphthylene	ND		ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH
120-12-7	**Anthracene**	**176**		ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH
56-55-3	**Benzo(a)anthracene**	**335**		ug/kg dry	44.2	88.3	2	EPA 8270D Certifications:	08/17/2021 07:39 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 04:42	KH

Sample Information

Client Sample ID: S-2 Comp RCA

York Sample ID: 21H0697-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Semi-Volatiles, NYSDEC Part 375 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
50-32-8	**Benzo(a)pyrene**	**299**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
205-99-2	**Benzo(b)fluoranthene**	**254**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
191-24-2	**Benzo(g,h,i)perylene**	**197**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
207-08-9	**Benzo(k)fluoranthene**	**243**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
218-01-9	**Chrysene**	**328**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
53-70-3	**Dibenzo(a,h)anthracene**	**58.6**	J	ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
132-64-9	**Dibenzofuran**	**69.9**	J	ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
206-44-0	**Fluoranthene**	**746**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
86-73-7	**Fluorene**	**94.6**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	NELAC-NY10854,NJDEP,PADEP		
118-74-1	Hexachlorobenzene	ND		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
193-39-5	**Indeno(1,2,3-cd)pyrene**	**242**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-20-3	**Naphthalene**	**54.3**	J	ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
87-86-5	Pentachlorophenol	ND		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
85-01-8	**Phenanthrene**	**661**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
108-95-2	Phenol	ND		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
129-00-0	**Pyrene**	**667**		ug/kg dry	44.2	88.3	2	EPA 8270D	08/17/2021 07:39	08/18/2021 04:42	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

	Surrogate Recoveries	Result		Acceptance Range
367-12-4	*Surrogate: SURR: 2-Fluorophenol*	*2.04 %*	S-04	*20-108*
4165-62-2	*Surrogate: SURR: Phenol-d5*	*16.6 %*	S-04	*23-114*
4165-60-0	*Surrogate: SURR: Nitrobenzene-d5*	*71.6 %*		*22-108*
321-60-8	*Surrogate: SURR: 2-Fluorobiphenyl*	*68.2 %*		*21-113*
118-79-6	*Surrogate: SURR: 2,4,6-Tribromophenol*	*0.560 %*	S-04	*19-110*
1718-51-0	*Surrogate: SURR: Terphenyl-d14*	*77.8 %*		*24-116*

Pesticides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Information

Client Sample ID: S-2 Comp RCA

York Sample ID: 21H0697-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
72-54-8	4,4'-DDD	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
72-55-9	4,4'-DDE	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
50-29-3	4,4'-DDT	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
309-00-2	Aldrin	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
319-84-6	alpha-BHC	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
5103-71-9	**alpha-Chlordane**	**13.1**		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 NELAC-NY10854,NJDEP	08/18/2021 13:55	CM
319-85-7	beta-BHC	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
319-86-8	delta-BHC	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
60-57-1	Dieldrin	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
959-98-8	Endosulfan I	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
33213-65-9	Endosulfan II	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854	08/18/2021 13:55	CM
1031-07-8	Endosulfan sulfate	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
72-20-8	Endrin	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
58-89-9	gamma-BHC (Lindane)	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM
76-44-8	Heptachlor	ND		ug/kg dry	1.64	5	EPA 8081B Certifications:	08/16/2021 12:49 CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 13:55	CM

	Surrogate Recoveries	Result	Acceptance Range
2051-24-3	*Surrogate: Decachlorobiphenyl*	*42.3 %*	*30-150*
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*42.0 %*	*30-150*

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12674-11-2	Aroclor 1016	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:30	BJ
11104-28-2	Aroclor 1221	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:30	BJ
11141-16-5	Aroclor 1232	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:30	BJ
53469-21-9	Aroclor 1242	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications:	08/16/2021 12:49 NELAC-NY10854,CTDOH,NJDEP,PADEP	08/17/2021 22:30	BJ

Sample Information

Client Sample ID: S-2 Comp RCA

York Sample ID: 21H0697-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Polychlorinated Biphenyls (PCB)

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
12672-29-6	Aroclor 1248	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP	08/16/2021 12:49	08/17/2021 22:30	BJ
11097-69-1	Aroclor 1254	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP	08/16/2021 12:49	08/17/2021 22:30	BJ
11096-82-5	Aroclor 1260	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP	08/16/2021 12:49	08/17/2021 22:30	BJ
1336-36-3	* Total PCBs	ND		mg/kg dry	0.0179	1	EPA 8082A Certifications:	08/16/2021 12:49	08/17/2021 22:30	BJ

	Surrogate Recoveries	Result		Acceptance Range
877-09-8	*Surrogate: Tetrachloro-m-xylene*	*50.5 %*		*30-140*
2051-24-3	*Surrogate: Decachlorobiphenyl*	*29.5 %*	S-GC	*30-140*

Herbicides, NYSDEC Part 375 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C/8151A

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
93-72-1	2,4,5-TP (Silvex)	ND		ug/kg dry	21.4	1	EPA 8151A Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/18/2021 16:08	08/19/2021 17:52	BJ

	Surrogate Recoveries	Result	Acceptance Range
19719-28-9	*Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)*	*49.2 %*	*21-150*

Metals, NYSDEC Part 375

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**2.88**		mg/kg dry	1.62	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7440-39-3	**Barium**	**54.2**		mg/kg dry	2.70	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7440-41-7	Beryllium	ND		mg/kg dry	0.054	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7440-43-9	Cadmium	ND		mg/kg dry	0.324	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7440-47-3	**Chromium**	**19.2**		mg/kg dry	0.540	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7440-50-8	**Copper**	**27.9**		mg/kg dry	2.16	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7439-92-1	**Lead**	**26.3**		mg/kg dry	0.540	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM
7439-96-5	**Manganese**	**160**		mg/kg dry	0.540	1	EPA 6010D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	08/17/2021 10:11	08/18/2021 20:49	EM

Sample Information

Client Sample ID: **S-2 Comp RCA** **York Sample ID:** **21H0697-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Metals, NYSDEC Part 375

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-02-0	**Nickel**	**12.5**		mg/kg dry	1.08	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:49	EM
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	Selenium	ND		mg/kg dry	2.70	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:49	EM
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.540	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:49	EM
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-66-6	**Zinc**	**133**		mg/kg dry	2.70	1	EPA 6010D	08/17/2021 10:11	08/18/2021 20:49	EM
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	**Mercury**	**0.0609**		mg/kg dry	0.0324	1	EPA 7473	08/19/2021 08:33	08/19/2021 12:45	BR
							Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP			

Chromium, Hexavalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA SW846-3060

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
18540-29-9	**Chromium, Hexavalent**	**2.16**		mg/kg dry	0.540	1	EPA 7196A	08/17/2021 08:14	08/17/2021 16:13	JAG
							Certifications: NJDEP,CTDOH,NELAC-NY10854,PADEP			

Chromium, Trivalent

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
16065-83-1	*** Chromium, Trivalent**	**17.0**		mg/kg	0.500	1	Calculation	08/19/2021 12:53	08/19/2021 13:03	PAM
							Certifications:			

Cyanide, Total

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: Analysis Preparation Soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
57-12-5	**Cyanide, total**	**0.896**		mg/kg dry	0.540	1	EPA 9014/9010C	08/16/2021 07:41	08/16/2021 15:14	JAG
							Certifications: NELAC-NY10854,CTDOH,NJDEP,PADEP			

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**92.6**		%	0.100	1	SM 2540G	08/18/2021 12:49	08/18/2021 18:12	VR
							Certifications: CTDOH			

Sample Information

Client Sample ID: **S-2 Comp RCA** **York Sample ID:** **21H0697-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Sample Information

Client Sample ID: **S-2 Voc** **York Sample ID:** **21H0697-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Volatile Organics, NYSDEC Part 375 List **Log-in Notes:** VOA-CONT **Sample Notes:** **VOA-CONT**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
123-91-1	1,4-Dioxane	ND		ug/kg dry	55	110	1	EPA 8260C Certifications:	08/18/2021 09:00 NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
78-93-3	2-Butanone	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
67-64-1	Acetone	ND		ug/kg dry	5.5	11	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
71-43-2	Benzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
108-90-7	Chlorobenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
67-66-3	Chloroform	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C Certifications:	08/18/2021 09:00 CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP	08/18/2021 16:30	OC

Sample Information

Client Sample ID: S-2 Voc

York Sample ID: 21H0697-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21H0697	1222 Speonk River Rd. West Hampton NY Prop.	Soil	August 13, 2021 9:45 am	08/13/2021

Volatile Organics, NYSDEC Part 375 List

Log-in Notes: VOA-CONT **Sample Notes:** VOA-CONT

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
75-09-2	**Methylene chloride**	**9.6**	J	ug/kg dry	5.5	11	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
91-20-3	Naphthalene	ND		ug/kg dry	2.7	11	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
95-47-6	o-Xylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	5.5	11	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
108-88-3	Toluene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
79-01-6	Trichloroethylene	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.7	5.5	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP,PADEP		
1330-20-7	Xylenes, Total	ND		ug/kg dry	8.2	16	1	EPA 8260C	08/18/2021 09:00	08/18/2021 16:30	OC
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,NJDEP		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: SURR: 1,2-Dichloroethane-d4*	*97.6 %*	*77-125*
2037-26-5	*Surrogate: SURR: Toluene-d8*	*103 %*	*85-120*
460-00-4	*Surrogate: SURR: p-Bromofluorobenzene*	*110 %*	*76-130*

Total Solids

Log-in Notes: VOA-CONT **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**91.2**		%	0.100	1	SM 2540G	08/18/2021 12:49	08/18/2021 18:12	VR
							Certifications: CTDOH			

Analytical Batch Summary

Batch ID: BH10776 **Preparation Method:** Analysis Preparation Soil **Prepared By:** JAG

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/16/21
21H0697-03	S-2 Comp RCA	08/16/21
BH10776-BLK1	Blank	08/16/21
BH10776-DUP1	Duplicate	08/16/21
BH10776-MS1	Matrix Spike	08/16/21
BH10776-SRM1	Reference	08/16/21

Batch ID: BH10819 **Preparation Method:** EPA 3550C **Prepared By:** EMS

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/16/21
21H0697-01	S-1 Comp Select Fill	08/16/21
21H0697-03	S-2 Comp RCA	08/16/21
21H0697-03	S-2 Comp RCA	08/16/21
BH10819-BLK1	Blank	08/16/21
BH10819-BLK2	Blank	08/16/21
BH10819-BS1	LCS	08/16/21
BH10819-BS2	LCS	08/16/21

Batch ID: BH10858 **Preparation Method:** EPA 3550C **Prepared By:** RTH

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/17/21
21H0697-03	S-2 Comp RCA	08/17/21
BH10858-BLK1	Blank	08/17/21
BH10858-BS1	LCS	08/17/21
BH10858-MS1	Matrix Spike	08/17/21
BH10858-MSD1	Matrix Spike Dup	08/17/21

Batch ID: BH10864 **Preparation Method:** EPA SW846-3060 **Prepared By:** JAG

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/17/21
21H0697-03	S-2 Comp RCA	08/17/21
BH10864-BLK1	Blank	08/17/21
BH10864-DUP1	Duplicate	08/17/21
BH10864-MS1	Matrix Spike	08/17/21
BH10864-MS2	Matrix Spike	08/17/21
BH10864-SRM1	Reference	08/17/21

Batch ID: BH10890 **Preparation Method:** EPA 3050B **Prepared By:** EM

YORK Sample ID	Client Sample ID	Preparation Date

21H0697-01	S-1 Comp Select Fill	08/17/21
21H0697-03	S-2 Comp RCA	08/17/21
BH10890-BLK1	Blank	08/17/21
BH10890-DUP1	Duplicate	08/17/21
BH10890-MS1	Matrix Spike	08/17/21
BH10890-PS1	Post Spike	08/17/21
BH10890-SRM1	Reference	08/17/21

Batch ID: BH10952 **Preparation Method:** EPA 5035A **Prepared By:** OC

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-02	S-1 Voc	08/18/21
21H0697-04	S-2 Voc	08/18/21
BH10952-BLK1	Blank	08/18/21
BH10952-BLK2	Blank	08/18/21
BH10952-BS1	LCS	08/18/21
BH10952-BSD1	LCS Dup	08/18/21
BH10952-MS1	Matrix Spike	08/18/21
BH10952-MSD1	Matrix Spike Dup	08/18/21

Batch ID: BH10978 **Preparation Method:** % Solids Prep **Prepared By:** VR

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/18/21
21H0697-02	S-1 Voc	08/18/21
21H0697-03	S-2 Comp RCA	08/18/21
21H0697-04	S-2 Voc	08/18/21
BH10978-DUP1	Duplicate	08/18/21

Batch ID: BH10996 **Preparation Method:** EPA 3550C/8151A **Prepared By:** RTH

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/18/21
21H0697-03	S-2 Comp RCA	08/18/21
BH10996-BLK1	Blank	08/18/21
BH10996-BS1	LCS	08/18/21

Batch ID: BH11032 **Preparation Method:** EPA 7473 soil **Prepared By:** AD

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/19/21
21H0697-03	S-2 Comp RCA	08/19/21
BH11032-BLK1	Blank	08/19/21
BH11032-DUP1	Duplicate	08/19/21
BH11032-MS1	Matrix Spike	08/19/21
BH11032-SRM1	Reference	08/19/21

Batch ID: BH11052 **Preparation Method:** Analysis Preparation **Prepared By:** PAM

YORK Sample ID	Client Sample ID	Preparation Date
21H0697-01	S-1 Comp Select Fill	08/19/21
21H0697-03	S-2 Comp RCA	08/19/21

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
Blank (BH10952-BLK1)									Prepared & Analyzed: 08/18/2021		
1,1,1-Trichloroethane	ND	5.0	ug/kg wet								
1,1-Dichloroethane	ND	5.0	"								
1,1-Dichloroethylene	ND	5.0	"								
1,2,4-Trimethylbenzene	ND	5.0	"								
1,2-Dichlorobenzene	ND	5.0	"								
1,2-Dichloroethane	ND	5.0	"								
1,3,5-Trimethylbenzene	ND	5.0	"								
1,3-Dichlorobenzene	ND	5.0	"								
1,4-Dichlorobenzene	ND	5.0	"								
1,4-Dioxane	ND	100	"								
2-Butanone	ND	5.0	"								
Acetone	ND	10	"								
Benzene	ND	5.0	"								
Carbon tetrachloride	ND	5.0	"								
Chlorobenzene	ND	5.0	"								
Chloroform	ND	5.0	"								
cis-1,2-Dichloroethylene	ND	5.0	"								
Ethyl Benzene	ND	5.0	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Methylene chloride	ND	10	"								
Naphthalene	ND	10	"								
n-Butylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
sec-Butylbenzene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Tetrachloroethylene	ND	5.0	"								
Toluene	ND	5.0	"								
trans-1,2-Dichloroethylene	ND	5.0	"								
Trichloroethylene	ND	5.0	"								
Vinyl Chloride	ND	5.0	"								
Xylenes, Total	ND	15	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*48.9*		*ug/L*	*50.0*		*97.7*	*77-125*				
Surrogate: SURR: Toluene-d8	*51.0*		*"*	*50.0*		*102*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*55.2*		*"*	*50.0*		*110*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
Blank (BH10952-BLK2)											
Prepared & Analyzed: 08/18/2021											
1,1,1-Trichloroethane	ND	500	ug/kg wet								
1,1-Dichloroethane	ND	500	"								
1,1-Dichloroethylene	ND	500	"								
1,2,4-Trimethylbenzene	ND	500	"								
1,2-Dichlorobenzene	ND	500	"								
1,2-Dichloroethane	ND	500	"								
1,3,5-Trimethylbenzene	ND	500	"								
1,3-Dichlorobenzene	ND	500	"								
1,4-Dichlorobenzene	ND	500	"								
1,4-Dioxane	ND	10000	"								
2-Butanone	ND	500	"								
Acetone	ND	1000	"								
Benzene	ND	500	"								
Carbon tetrachloride	ND	500	"								
Chlorobenzene	ND	500	"								
Chloroform	ND	500	"								
cis-1,2-Dichloroethylene	ND	500	"								
Ethyl Benzene	ND	500	"								
Methyl tert-butyl ether (MTBE)	ND	500	"								
Methylene chloride	ND	1000	"								
Naphthalene	ND	1000	"								
n-Butylbenzene	ND	500	"								
n-Propylbenzene	ND	500	"								
o-Xylene	ND	500	"								
p- & m- Xylenes	ND	1000	"								
sec-Butylbenzene	ND	500	"								
tert-Butylbenzene	ND	500	"								
Tetrachloroethylene	ND	500	"								
Toluene	ND	500	"								
trans-1,2-Dichloroethylene	ND	500	"								
Trichloroethylene	ND	500	"								
Vinyl Chloride	ND	500	"								
Xylenes, Total	ND	1500	"								
Surrogate: SURR: 1,2-Dichloroethane-d4	*55.0*		*ug/L*	*50.0*		*110*	*77-125*				
Surrogate: SURR: Toluene-d8	*49.7*		*"*	*50.0*		*99.5*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*52.3*		*"*	*50.0*		*105*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
LCS (BH10952-BS1)							Prepared & Analyzed: 08/18/2021				
1,1,1-Trichloroethane	46		ug/L	50.0		92.6	71-137				
1,1-Dichloroethane	46		"	50.0		91.9	75-130				
1,1-Dichloroethylene	42		"	50.0		83.0	64-137				
1,2,4-Trimethylbenzene	52		"	50.0		103	84-125				
1,2-Dichlorobenzene	51		"	50.0		102	85-122				
1,2-Dichloroethane	49		"	50.0		98.1	71-133				
1,3,5-Trimethylbenzene	51		"	50.0		102	82-126				
1,3-Dichlorobenzene	52		"	50.0		103	84-124				
1,4-Dichlorobenzene	52		"	50.0		104	84-124				
1,4-Dioxane	930		"	1050		88.7	10-228				
2-Butanone	38		"	50.0		75.9	58-147				
Acetone	25		"	50.0		50.6	36-155				
Benzene	46		"	50.0		92.7	77-127				
Carbon tetrachloride	45		"	50.0		90.5	66-143				
Chlorobenzene	48		"	50.0		95.2	86-120				
Chloroform	49		"	50.0		97.0	76-131				
cis-1,2-Dichloroethylene	47		"	50.0		93.4	74-132				
Ethyl Benzene	49		"	50.0		97.4	84-125				
Methyl tert-butyl ether (MTBE)	47		"	50.0		94.8	74-131				
Methylene chloride	43		"	50.0		85.7	57-141				
Naphthalene	55		"	50.0		110	86-141				
n-Butylbenzene	49		"	50.0		98.2	80-130				
n-Propylbenzene	50		"	50.0		99.7	74-136				
o-Xylene	49		"	50.0		98.9	83-123				
p- & m- Xylenes	98		"	100		98.3	82-128				
sec-Butylbenzene	51		"	50.0		101	83-125				
tert-Butylbenzene	44		"	50.0		88.1	80-127				
Tetrachloroethylene	41		"	50.0		81.6	80-129				
Toluene	48		"	50.0		95.3	85-121				
trans-1,2-Dichloroethylene	47		"	50.0		94.3	72-132				
Trichloroethylene	48		"	50.0		95.5	84-123				
Vinyl Chloride	43		"	50.0		86.0	52-130				
Surrogate: SURR: 1,2-Dichloroethane-d4	*51.2*		*"*	*50.0*		*102*	*77-125*				
Surrogate: SURR: Toluene-d8	*50.0*		*"*	*50.0*		*100*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*52.1*		*"*	*50.0*		*104*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
LCS Dup (BH10952-BSD1)								Prepared & Analyzed: 08/18/2021			
1,1,1-Trichloroethane	49		ug/L	50.0		98.7	71-137		6.34	30	
1,1-Dichloroethane	47		"	50.0		94.8	75-130		3.13	30	
1,1-Dichloroethylene	44		"	50.0		87.1	64-137		4.80	30	
1,2,4-Trimethylbenzene	56		"	50.0		112	84-125		8.45	30	
1,2-Dichlorobenzene	53		"	50.0		106	85-122		4.01	30	
1,2-Dichloroethane	48		"	50.0		95.1	71-133		3.19	30	
1,3,5-Trimethylbenzene	56		"	50.0		112	82-126		9.50	30	
1,3-Dichlorobenzene	55		"	50.0		110	84-124		6.53	30	
1,4-Dichlorobenzene	55		"	50.0		109	84-124		5.48	30	
1,4-Dioxane	880		"	1050		83.9	10-228		5.51	30	
2-Butanone	36		"	50.0		72.8	58-147		4.28	30	
Acetone	22		"	50.0		44.4	36-155		13.0	30	
Benzene	47		"	50.0		94.5	77-127		1.88	30	
Carbon tetrachloride	48		"	50.0		95.4	66-143		5.31	30	
Chlorobenzene	49		"	50.0		98.4	86-120		3.33	30	
Chloroform	49		"	50.0		98.5	76-131		1.45	30	
cis-1,2-Dichloroethylene	48		"	50.0		95.7	74-132		2.45	30	
Ethyl Benzene	52		"	50.0		103	84-125		5.66	30	
Methyl tert-butyl ether (MTBE)	45		"	50.0		90.9	74-131		4.20	30	
Methylene chloride	42		"	50.0		84.7	57-141		1.15	30	
Naphthalene	54		"	50.0		108	86-141		1.47	30	
n-Butylbenzene	54		"	50.0		109	80-130		10.2	30	
n-Propylbenzene	55		"	50.0		110	74-136		9.54	30	
o-Xylene	51		"	50.0		103	83-123		3.91	30	
p- & m- Xylenes	100		"	100		104	82-128		5.14	30	
sec-Butylbenzene	57		"	50.0		114	83-125		11.9	30	
tert-Butylbenzene	49		"	50.0		97.3	80-127		9.86	30	
Tetrachloroethylene	43		"	50.0		86.9	80-129		6.27	30	
Toluene	50		"	50.0		100	85-121		5.29	30	
trans-1,2-Dichloroethylene	49		"	50.0		98.8	72-132		4.66	30	
Trichloroethylene	51		"	50.0		102	84-123		6.89	30	
Vinyl Chloride	45		"	50.0		89.6	52-130		4.17	30	
Surrogate: SURR: 1,2-Dichloroethane-d4	*49.8*		*"*	*50.0*		*99.6*	*77-125*				
Surrogate: SURR: Toluene-d8	*50.1*		*"*	*50.0*		*100*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*53.4*		*"*	*50.0*		*107*	*76-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
Matrix Spike (BH10952-MS1)	*Source sample: 21H0720-02 (Matrix Spike)							Prepared & Analyzed: 08/18/2021			
1,1,1-Trichloroethane	34		ug/L	50.0	0.0	68.9	42-145				
1,1-Dichloroethane	38		"	50.0	0.0	75.4	46-142				
1,1-Dichloroethylene	29		"	50.0	0.0	58.9	30-153				
1,2,4-Trimethylbenzene	27		"	50.0	0.0	53.1	10-170				
1,2-Dichlorobenzene	24		"	50.0	0.0	49.0	10-147				
1,2-Dichloroethane	43		"	50.0	0.0	86.1	48-133				
1,3,5-Trimethylbenzene	26		"	50.0	0.0	52.9	10-150				
1,3-Dichlorobenzene	24		"	50.0	0.0	48.7	10-144				
1,4-Dichlorobenzene	25		"	50.0	0.0	49.5	10-160				
1,4-Dioxane	810		"	1050	0.0	77.4	10-191				
2-Butanone	35		"	50.0	0.0	69.1	10-189				
Acetone	20		"	50.0	0.0	40.9	10-196				
Benzene	36		"	50.0	0.0	71.6	43-139				
Carbon tetrachloride	31		"	50.0	0.0	61.6	35-145				
Chlorobenzene	30		"	50.0	0.0	60.0	21-154				
Chloroform	39		"	50.0	0.0	78.9	47-142				
cis-1,2-Dichloroethylene	37		"	50.0	0.0	73.8	42-144				
Ethyl Benzene	30		"	50.0	0.0	59.4	11-158				
Methyl tert-butyl ether (MTBE)	42		"	50.0	0.0	84.7	42-152				
Methylene chloride	43		"	50.0	0.0	85.9	28-151				
Naphthalene	22		"	50.0	0.0	44.8	10-158				
n-Butylbenzene	18		"	50.0	0.0	36.5	10-162				
n-Propylbenzene	25		"	50.0	0.0	50.3	10-155				
o-Xylene	31		"	50.0	0.0	61.0	10-158				
p- & m- Xylenes	59		"	100	0.0	58.6	10-156				
sec-Butylbenzene	22		"	50.0	0.0	44.6	10-157				
tert-Butylbenzene	22		"	50.0	0.0	44.7	10-160				
Tetrachloroethylene	23		"	50.0	0.0	46.4	30-167				
Toluene	33		"	50.0	0.0	65.7	21-160				
trans-1,2-Dichloroethylene	37		"	50.0	0.0	73.3	29-153				
Trichloroethylene	33		"	50.0	0.0	65.5	24-169				
Vinyl Chloride	33		"	50.0	0.0	65.4	12-160				
Surrogate: SURR: 1,2-Dichloroethane-d4	*55.5*		*"*	*50.0*		*111*	*77-125*				
Surrogate: SURR: Toluene-d8	*50.0*		*"*	*50.0*		*99.9*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*53.9*		*"*	*50.0*		*108*	*70-130*				

Volatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10952 - EPA 5035A											
Matrix Spike Dup (BH10952-MSD1)	*Source sample: 21H0720-02 (Matrix Spike Dup)								Prepared & Analyzed: 08/18/2021		
1,1,1-Trichloroethane	31		ug/L	50.0	0.0	62.9	42-145		9.02	30	
1,1-Dichloroethane	34		"	50.0	0.0	68.2	46-142		10.1	36	
1,1-Dichloroethylene	28		"	50.0	0.0	56.0	30-153		5.01	31	
1,2,4-Trimethylbenzene	24		"	50.0	0.0	47.2	10-170		11.7	242	
1,2-Dichlorobenzene	21		"	50.0	0.0	42.2	10-147		14.9	52	
1,2-Dichloroethane	38		"	50.0	0.0	75.6	48-133		13.1	32	
1,3,5-Trimethylbenzene	24		"	50.0	0.0	47.4	10-150		10.8	62	
1,3-Dichlorobenzene	21		"	50.0	0.0	41.9	10-144		14.8	51	
1,4-Dichlorobenzene	21		"	50.0	0.0	42.9	10-160		14.2	52	
1,4-Dioxane	620		"	1050	0.0	59.4	10-191		26.3	196	
2-Butanone	25		"	50.0	0.0	49.6	10-189		32.7	67	
Acetone	19		"	50.0	0.0	37.2	10-196		9.48	150	
Benzene	32		"	50.0	0.0	64.8	43-139		10.1	64	
Carbon tetrachloride	28		"	50.0	0.0	55.5	35-145		10.4	31	
Chlorobenzene	26		"	50.0	0.0	53.0	21-154		12.3	32	
Chloroform	35		"	50.0	0.0	69.9	47-142		12.1	29	
cis-1,2-Dichloroethylene	33		"	50.0	0.0	65.8	42-144		11.5	30	
Ethyl Benzene	27		"	50.0	0.0	53.5	11-158		10.4	42	
Methyl tert-butyl ether (MTBE)	37		"	50.0	0.0	74.6	42-152		12.6	47	
Methylene chloride	39		"	50.0	0.0	78.2	28-151		9.38	49	
Naphthalene	18		"	50.0	0.0	35.2	10-158		24.1	95	
n-Butylbenzene	17		"	50.0	0.0	33.5	10-162		8.58	96	
n-Propylbenzene	23		"	50.0	0.0	45.7	10-155		9.59	56	
o-Xylene	27		"	50.0	0.0	54.5	10-158		11.3	51	
p- & m- Xylenes	52		"	100	0.0	52.2	10-156		11.6	47	
sec-Butylbenzene	21		"	50.0	0.0	41.3	10-157		7.74	56	
tert-Butylbenzene	20		"	50.0	0.0	40.1	10-160		11.0	79	
Tetrachloroethylene	21		"	50.0	0.0	41.2	30-167		12.0	33	
Toluene	30		"	50.0	0.0	60.3	21-160		8.70	50	
trans-1,2-Dichloroethylene	32		"	50.0	0.0	65.0	29-153		12.0	30	
Trichloroethylene	31		"	50.0	0.0	61.0	24-169		7.11	30	
Vinyl Chloride	30		"	50.0	0.0	60.0	12-160		8.71	35	
Surrogate: SURR: 1,2-Dichloroethane-d4	*52.1*		*"*	*50.0*		*104*	*77-125*				
Surrogate: SURR: Toluene-d8	*50.6*		*"*	*50.0*		*101*	*85-120*				
Surrogate: SURR: p-Bromofluorobenzene	*54.5*		*"*	*50.0*		*109*	*70-130*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10858 - EPA 3550C											
Blank (BH10858-BLK1)											Prepared & Analyzed: 08/17/2021
2-Methylphenol	ND	41.6	ug/kg wet								
3- & 4-Methylphenols	ND	41.6	"								
Acenaphthene	ND	41.6	"								
Acenaphthylene	ND	41.6	"								
Anthracene	ND	41.6	"								
Benzo(a)anthracene	ND	41.6	"								
Benzo(a)pyrene	ND	41.6	"								
Benzo(b)fluoranthene	ND	41.6	"								
Benzo(g,h,i)perylene	ND	41.6	"								
Benzo(k)fluoranthene	ND	41.6	"								
Chrysene	ND	41.6	"								
Dibenzo(a,h)anthracene	ND	41.6	"								
Dibenzofuran	ND	41.6	"								
Fluoranthene	ND	41.6	"								
Fluorene	ND	41.6	"								
Hexachlorobenzene	ND	41.6	"								
Indeno(1,2,3-cd)pyrene	ND	41.6	"								
Naphthalene	ND	41.6	"								
Pentachlorophenol	ND	41.6	"								
Phenanthrene	ND	41.6	"								
Phenol	ND	41.6	"								
Pyrene	ND	41.6	"								
Surrogate: SURR: 2-Fluorophenol	*1420*		"	*1660*		*85.5*	*20-108*				
Surrogate: SURR: Phenol-d5	*1210*		"	*1660*		*73.0*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*695*		"	*831*		*83.7*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*714*		"	*831*		*86.0*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1640*		"	*1660*		*98.9*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*866*		"	*831*		*104*	*24-116*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10858 - EPA 3550C											
LCS (BH10858-BS1)								Prepared & Analyzed: 08/17/2021			
2-Methylphenol	855	41.6	ug/kg wet	831		103	10-146				
3- & 4-Methylphenols	759	41.6	"	831		91.4	20-109				
Acenaphthene	981	41.6	"	831		118	17-124				
Acenaphthylene	898	41.6	"	831		108	16-124				
Anthracene	1070	41.6	"	831		129	24-124	High Bias			
Benzo(a)anthracene	1080	41.6	"	831		130	25-134				
Benzo(a)pyrene	1060	41.6	"	831		127	29-144				
Benzo(b)fluoranthene	1000	41.6	"	831		121	20-151				
Benzo(g,h,i)perylene	1080	41.6	"	831		129	10-153				
Benzo(k)fluoranthene	1010	41.6	"	831		121	10-148				
Chrysene	1070	41.6	"	831		129	24-116	High Bias			
Dibenzo(a,h)anthracene	1110	41.6	"	831		134	17-147				
Dibenzofuran	974	41.6	"	831		117	23-123				
Fluoranthene	955	41.6	"	831		115	36-125				
Fluorene	988	41.6	"	831		119	16-130				
Hexachlorobenzene	841	41.6	"	831		101	10-129				
Indeno(1,2,3-cd)pyrene	1080	41.6	"	831		130	10-155				
Naphthalene	964	41.6	"	831		116	20-121				
Pentachlorophenol	577	41.6	"	831		69.4	10-143				
Phenanthrene	988	41.6	"	831		119	24-123				
Phenol	917	41.6	"	831		110	15-123				
Pyrene	1150	41.6	"	831		139	24-132	High Bias			
Surrogate: SURR: 2-Fluorophenol	*1390*		*"*	*1660*		*83.5*	*20-108*				
Surrogate: SURR: Phenol-d5	*1270*		*"*	*1660*		*76.6*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*725*		*"*	*831*		*87.3*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*744*		*"*	*831*		*89.6*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1860*		*"*	*1660*		*112*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*1010*		*"*	*831*		*121*	*24-116*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10858 - EPA 3550C											
Matrix Spike (BH10858-MS1)	*Source sample: 21H0507-03 (Matrix Spike)						Prepared & Analyzed: 08/17/2021				
2-Methylphenol	599	89.5	ug/kg dry	894	ND	67.0	10-160				
3- & 4-Methylphenols	532	89.5	"	894	ND	59.5	16-115				
Acenaphthene	754	89.5	"	894	ND	84.3	13-133				
Acenaphthylene	683	89.5	"	894	ND	76.4	25-125				
Anthracene	803	89.5	"	894	ND	89.8	27-128				
Benzo(a)anthracene	1170	89.5	"	894	197	109	20-147				
Benzo(a)pyrene	1120	89.5	"	894	166	107	18-153				
Benzo(b)fluoranthene	1010	89.5	"	894	148	96.7	10-163				
Benzo(g,h,i)perylene	949	89.5	"	894	117	93.1	10-157				
Benzo(k)fluoranthene	1010	89.5	"	894	135	98.1	10-157				
Chrysene	1100	89.5	"	894	161	105	18-133				
Dibenzo(a,h)anthracene	808	89.5	"	894	ND	90.4	10-146				
Dibenzofuran	694	89.5	"	894	ND	77.6	26-134				
Fluoranthene	1200	89.5	"	894	280	103	10-155				
Fluorene	710	89.5	"	894	ND	79.4	12-150				
Hexachlorobenzene	649	89.5	"	894	ND	72.6	16-142				
Indeno(1,2,3-cd)pyrene	945	89.5	"	894	99.5	94.6	10-155				
Naphthalene	730	89.5	"	894	ND	81.7	15-132				
Pentachlorophenol	242	89.5	"	894	ND	27.0	10-160				
Phenanthrene	813	89.5	"	894	58.3	84.4	10-151				
Phenol	644	89.5	"	894	ND	72.1	11-124				
Pyrene	1580	89.5	"	894	330	140	13-148				
Surrogate: SURR: 2-Fluorophenol	*1350*		"	*1790*		*75.8*	*20-108*				
Surrogate: SURR: Phenol-d5	*1230*		"	*1790*		*68.6*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*697*		"	*894*		*77.9*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*757*		"	*894*		*84.6*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1580*		"	*1790*		*88.1*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*910*		"	*894*		*102*	*24-116*				

Semivolatile Organic Compounds by GC/MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10858 - EPA 3550C											
Matrix Spike Dup (BH10858-MSD1)	*Source sample: 21H0507-03 (Matrix Spike Dup)								Prepared & Analyzed: 08/17/2021		
2-Methylphenol	572	89.5	ug/kg dry	894	ND	64.0	10-160		4.52	30	
3- & 4-Methylphenols	519	89.5	"	894	ND	58.1	16-115		2.45	30	
Acenaphthene	733	89.5	"	894	ND	82.0	13-133		2.79	30	
Acenaphthylene	686	89.5	"	894	ND	76.7	25-125		0.418	30	
Anthracene	816	89.5	"	894	ND	91.3	27-128		1.59	30	
Benzo(a)anthracene	1120	89.5	"	894	197	104	20-147		4.24	30	
Benzo(a)pyrene	1070	89.5	"	894	166	101	18-153		4.77	30	
Benzo(b)fluoranthene	991	89.5	"	894	148	94.3	10-163		2.21	30	
Benzo(g,h,i)perylene	947	89.5	"	894	117	92.9	10-157		0.226	30	
Benzo(k)fluoranthene	968	89.5	"	894	135	93.2	10-157		4.41	30	
Chrysene	1070	89.5	"	894	161	102	18-133		2.77	30	
Dibenzo(a,h)anthracene	762	89.5	"	894	ND	85.2	10-146		5.92	30	
Dibenzofuran	707	89.5	"	894	ND	79.1	26-134		1.94	30	
Fluoranthene	1180	89.5	"	894	280	101	10-155		1.62	30	
Fluorene	723	89.5	"	894	ND	80.9	12-150		1.80	30	
Hexachlorobenzene	630	89.5	"	894	ND	70.5	16-142		3.02	30	
Indeno(1,2,3-cd)pyrene	936	89.5	"	894	99.5	93.5	10-155		0.989	30	
Naphthalene	717	89.5	"	894	ND	80.2	15-132		1.78	30	
Pentachlorophenol	278	89.5	"	894	ND	31.1	10-160		14.0	30	
Phenanthrene	847	89.5	"	894	58.3	88.2	10-151		4.05	30	
Phenol	649	89.5	"	894	ND	72.6	11-124		0.664	30	
Pyrene	1560	89.5	"	894	330	138	13-148		1.27	30	
Surrogate: SURR: 2-Fluorophenol	*1340*		*"*	*1790*		*74.8*	*20-108*				
Surrogate: SURR: Phenol-d5	*1180*		*"*	*1790*		*65.7*	*23-114*				
Surrogate: SURR: Nitrobenzene-d5	*662*		*"*	*894*		*74.1*	*22-108*				
Surrogate: SURR: 2-Fluorobiphenyl	*721*		*"*	*894*		*80.6*	*21-113*				
Surrogate: SURR: 2,4,6-Tribromophenol	*1640*		*"*	*1790*		*91.6*	*19-110*				
Surrogate: SURR: Terphenyl-d14	*911*		*"*	*894*		*102*	*24-116*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10819 - EPA 3550C											
Blank (BH10819-BLK1)											Prepared: 08/16/2021 Analyzed: 08/17/2021
4,4'-DDD	ND	1.64	ug/kg wet								
4,4'-DDE	ND	1.64	"								
4,4'-DDT	ND	1.64	"								
Aldrin	ND	1.64	"								
alpha-BHC	ND	1.64	"								
alpha-Chlordane	ND	1.64	"								
beta-BHC	ND	1.64	"								
delta-BHC	ND	1.64	"								
Dieldrin	ND	1.64	"								
Endosulfan I	ND	1.64	"								
Endosulfan II	ND	1.64	"								
Endosulfan sulfate	ND	1.64	"								
Endrin	ND	1.64	"								
gamma-BHC (Lindane)	ND	1.64	"								
Heptachlor	ND	1.64	"								
Surrogate: Decachlorobiphenyl	*39.3*		*"*	*66.4*		*59.1*	*30-150*				
Surrogate: Tetrachloro-m-xylene	*45.1*		*"*	*66.4*		*67.9*	*30-150*				
LCS (BH10819-BS1)											Prepared: 08/16/2021 Analyzed: 08/17/2021
4,4'-DDD	22.2	1.64	ug/kg wet	33.2		66.7	40-140				
4,4'-DDE	20.0	1.64	"	33.2		60.2	40-140				
4,4'-DDT	16.6	1.64	"	33.2		50.1	40-140				
Aldrin	29.4	1.64	"	33.2		88.5	40-140				
alpha-BHC	28.6	1.64	"	33.2		86.0	40-140				
alpha-Chlordane	29.6	1.64	"	33.2		89.1	40-140				
beta-BHC	28.2	1.64	"	33.2		84.8	40-140				
delta-BHC	25.2	1.64	"	33.2		76.0	40-140				
Dieldrin	31.2	1.64	"	33.2		93.9	40-140				
Endosulfan I	35.1	1.64	"	33.2		106	40-140				
Endosulfan II	35.2	1.64	"	33.2		106	40-140				
Endosulfan sulfate	27.2	1.64	"	33.2		82.0	40-140				
Endrin	24.0	1.64	"	33.2		72.3	40-140				
gamma-BHC (Lindane)	26.5	1.64	"	33.2		79.7	40-140				
Heptachlor	32.1	1.64	"	33.2		96.6	40-140				
Surrogate: Decachlorobiphenyl	*46.3*		*"*	*66.4*		*69.7*	*30-150*				
Surrogate: Tetrachloro-m-xylene	*52.5*		*"*	*66.4*		*79.1*	*30-150*				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch Y1D0212 - BC11630											
Performance Mix (Y1D0212-PEM1)								Prepared & Analyzed: 04/01/2021			
4,4'-DDD	10.7		ng/mL	0.00			0-200				
4,4'-DDE	0.811		"	0.00			0-200				
4,4'-DDT	247		"	200		123	0-200				
Endrin	129		"	100		129	0-200				
Batch Y1G1207 - BE10937											
Performance Mix (Y1G1207-PEM1)								Prepared & Analyzed: 07/09/2021			
4,4'-DDD	9.58		ng/mL	0.00			0-200				
4,4'-DDE	1.13		"	0.00			0-200				
4,4'-DDT	143		"	200		71.4	0-200				
Endrin	88.9		"	100		88.9	0-200				
Batch Y1H1814 - BH10662											
Performance Mix (Y1H1814-PEM1)								Prepared & Analyzed: 08/17/2021			
4,4'-DDD	14.7		ng/mL	0.00			0-200				
4,4'-DDE	2.46		"	0.00			0-200				
4,4'-DDT	242		"	200		121	0-200				
Endrin	141		"	100		141	0-200				
Performance Mix (Y1H1814-PEM2)								Prepared & Analyzed: 08/17/2021			
4,4'-DDD	22.2		ng/mL	0.00			0-200				
4,4'-DDE	3.27		"	0.00			0-200				
4,4'-DDT	196		"	200		98.1	0-200				
Endrin	137		"	100		137	0-200				

Organochlorine Pesticides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch Y1H1910 - BH10632											
Performance Mix (Y1H1910-PEM1)							Prepared & Analyzed: 08/18/2021				
4,4'-DDD	14.8		ng/mL	0.00			0-200				
4,4'-DDE	2.77		"	0.00			0-200				
4,4'-DDT	237		"	200		119	0-200				
Endrin	153		"	100		153	0-200				

Polychlorinated Biphenyls by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10819 - EPA 3550C											
Blank (BH10819-BLK2)											
Prepared: 08/16/2021 Analyzed: 08/17/2021											
Aroclor 1016	ND	0.0166	mg/kg wet								
Aroclor 1221	ND	0.0166	"								
Aroclor 1232	ND	0.0166	"								
Aroclor 1242	ND	0.0166	"								
Aroclor 1248	ND	0.0166	"								
Aroclor 1254	ND	0.0166	"								
Aroclor 1260	ND	0.0166	"								
Total PCBs	ND	0.0166	"								
Surrogate: Tetrachloro-m-xylene	*0.0495*		*"*	*0.0664*		*74.5*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0339*		*"*	*0.0664*		*51.0*	*30-140*				
LCS (BH10819-BS2)											
Prepared: 08/16/2021 Analyzed: 08/17/2021											
Aroclor 1016	0.292	0.0166	mg/kg wet	0.332		87.9	40-130				
Aroclor 1260	0.275	0.0166	"	0.332		82.9	40-130				
Surrogate: Tetrachloro-m-xylene	*0.0472*		*"*	*0.0664*		*71.0*	*30-140*				
Surrogate: Decachlorobiphenyl	*0.0349*		*"*	*0.0664*		*52.5*	*30-140*				
Batch Y1H1738 - BH10859											
Aroclor Reference (Y1H1738-ARC1)											
Prepared & Analyzed: 08/17/2021											
Surrogate: Tetrachloro-m-xylene	*0.184*		*ug/mL*	*0.200*		*92.0*					
Surrogate: Decachlorobiphenyl	*0.179*		*"*	*0.200*		*89.5*					

Chlorinated Herbicides by GC/ECD - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10996 - EPA 3550C/8151A											
Blank (BH10996-BLK1)									Prepared: 08/18/2021 Analyzed: 08/19/2021		
2,4,5-TP (Silvex)	ND	19.9	ug/kg wet								
Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)	*444*		*"*	*415*		*107*	*21-150*				
LCS (BH10996-BS1)									Prepared: 08/18/2021 Analyzed: 08/19/2021		
2,4,5-TP (Silvex)	160	19.9	ug/kg wet	133		121	10-120	High Bias			
Surrogate: 2,4-Dichlorophenylacetic acid (DCAA)	*455*		*"*	*415*		*110*	*21-150*				

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10890 - EPA 3050B											
Blank (BH10890-BLK1)											Prepared: 08/17/2021 Analyzed: 08/18/2021
Arsenic	ND	1.50	mg/kg wet								
Barium	ND	2.50	"								
Beryllium	ND	0.050	"								
Cadmium	ND	0.300	"								
Chromium	ND	0.500	"								
Copper	ND	2.00	"								
Lead	ND	0.500	"								
Manganese	ND	0.500	"								
Nickel	ND	1.00	"								
Selenium	ND	2.50	"								
Silver	ND	0.500	"								
Zinc	ND	2.50	"								
Duplicate (BH10890-DUP1)	*Source sample: 21H0697-03 (S-2 Comp RCA)										Prepared: 08/17/2021 Analyzed: 08/18/2021
Arsenic	5.35	1.62	mg/kg dry		2.88				60.0	35	Non-dir.
Barium	60.5	2.70	"		54.2				11.0	35	
Beryllium	ND	0.054	"		ND					35	
Cadmium	ND	0.324	"		ND					35	
Chromium	26.8	0.540	"		19.2				33.0	35	
Copper	31.9	2.16	"		27.9				13.3	35	
Lead	33.9	0.540	"		26.3				25.3	35	
Manganese	170	0.540	"		160				6.34	35	
Nickel	15.7	1.08	"		12.5				22.9	35	
Selenium	ND	2.70	"		ND					35	
Silver	ND	0.540	"		ND					35	
Zinc	79.4	2.70	"		133				50.7	35	Non-dir.
Matrix Spike (BH10890-MS1)	*Source sample: 21H0697-03 (S-2 Comp RCA)										Prepared: 08/17/2021 Analyzed: 08/18/2021
Arsenic	218	1.62	mg/kg dry	216	2.88	99.5	75-125				
Barium	277	2.70	"	216	54.2	103	75-125				
Beryllium	4.58	0.054	"	5.40	ND	84.9	75-125				
Cadmium	5.30	0.324	"	5.40	ND	98.3	75-125				
Chromium	45.4	0.540	"	21.6	19.2	121	75-125				
Copper	64.2	2.16	"	27.0	27.9	135	75-125	High Bias			
Lead	89.7	0.540	"	54.0	26.3	118	75-125				
Manganese	261	0.540	"	54.0	160	187	75-125	High Bias			
Nickel	79.4	1.08	"	54.0	12.5	124	75-125				
Selenium	195	2.70	"	216	ND	90.3	75-125				
Silver	5.80	0.540	"	5.40	ND	107	75-125				
Zinc	207	2.70	"	54.0	133	137	75-125	High Bias			

Metals by ICP - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10890 - EPA 3050B											
Post Spike (BH10890-PS1)	*Source sample: 21H0697-03 (S-2 Comp RCA)									Prepared: 08/17/2021 Analyzed: 08/18/2021	
Arsenic	2.07		ug/mL	2.00	0.027	102	75-125				
Barium	2.56		"	2.00	0.502	103	75-125				
Beryllium	0.041		"	0.0500	-0.009	82.4	75-125				
Cadmium	0.050		"	0.0500	0.003	94.1	75-125				
Chromium	0.373		"	0.200	0.178	97.2	75-125				
Copper	0.559		"	0.250	0.258	121	75-125				
Lead	0.748		"	0.500	0.244	101	75-125				
Manganese	2.03		"	0.500	1.48	110	75-125				
Nickel	0.660		"	0.500	0.116	109	75-125				
Selenium	1.91		"	2.00	0.012	95.1	75-125				
Silver	0.056		"	0.0500	0.001	110	75-125				
Zinc	1.69		"	0.500	1.23	90.3	75-125				
Reference (BH10890-SRM1)										Prepared: 08/17/2021 Analyzed: 08/18/2021	
Arsenic	165	1.50	mg/kg wet	156		106	69.9-130.1				
Barium	259	2.50	"	239		108	74.9-124.7				
Beryllium	180	0.050	"	169		107	75.1-125.4				
Cadmium	144	0.300	"	137		105	75.2-124.8				
Chromium	157	0.500	"	154		102	70.1-129.9				
Copper	61.1	2.00	"	54.9		111	74.9-125				
Lead	131	0.500	"	130		100	71.8-128.5				
Manganese	288	0.500	"	269		107	74-126.4				
Nickel	68.8	1.00	"	53.9		128	69.9-129.9				
Selenium	155	2.50	"	167		93.1	67.7-132.3				
Silver	33.3	0.500	"	33.6		99.1	68.5-131.3				
Zinc	151	2.50	"	158		95.4	70.3-129.7				

Mercury by EPA 7000/200 Series Methods - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH11032 - EPA 7473 soil											
Blank (BH11032-BLK1)								Prepared & Analyzed: 08/19/2021			
Mercury	ND	0.0300	mg/kg wet								
Duplicate (BH11032-DUP1)	*Source sample: 21H0775-09 (Duplicate)							Prepared & Analyzed: 08/19/2021			
Mercury	0.129	0.0328	mg/kg dry		0.168				25.9	35	
Matrix Spike (BH11032-MS1)	*Source sample: 21H0775-09 (Matrix Spike)							Prepared & Analyzed: 08/19/2021			
Mercury	0.684		mg/kg	0.500	0.154	106	75-125				
Reference (BH11032-SRM1)								Prepared & Analyzed: 08/19/2021			
Mercury	21.916		mg/kg	27.2		80.6	59.9-140.1				

Wet Chemistry Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10776 - Analysis Preparation Soil											
Blank (BH10776-BLK1)								Prepared & Analyzed: 08/16/2021			
Cyanide, total	ND	0.500	mg/kg wet								
Duplicate (BH10776-DUP1)	*Source sample: 21H0675-01 (Duplicate)							Prepared & Analyzed: 08/16/2021			
Cyanide, total	ND	0.521	mg/kg dry		ND					15	
Matrix Spike (BH10776-MS1)	*Source sample: 21H0675-01 (Matrix Spike)							Prepared & Analyzed: 08/16/2021			
Cyanide, total	8.42	0.521	mg/kg dry	10.4	ND	80.7	79.6-107				
Reference (BH10776-SRM1)								Prepared & Analyzed: 08/16/2021			
Cyanide, total	111		ug/mL	91.9		121	42.22-159.96				
Batch BH10864 - EPA SW846-3060											
Blank (BH10864-BLK1)								Prepared & Analyzed: 08/17/2021			
Chromium, Hexavalent	ND	0.500	mg/kg wet								
Duplicate (BH10864-DUP1)	*Source sample: 21H0675-01 (Duplicate)							Prepared & Analyzed: 08/17/2021			
Chromium, Hexavalent	ND	0.521	mg/kg dry		ND					35	
Matrix Spike (BH10864-MS1)	*Source sample: 21H0675-01 (Matrix Spike)							Prepared & Analyzed: 08/17/2021			
Chromium, Hexavalent	15.8	0.521	mg/kg dry	20.8	ND	75.6	75-125				
Matrix Spike (BH10864-MS2)	*Source sample: 21H0675-01 (Matrix Spike)							Prepared & Analyzed: 08/17/2021			
Chromium, Hexavalent	16.6	0.521	mg/kg dry	20.8	ND	79.8	75-125				
Reference (BH10864-SRM1)								Prepared & Analyzed: 08/17/2021			
Chromium, Hexavalent	93.9		mg/L	109		86.1	30-169.7				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BH10978 - % Solids Prep											
Duplicate (BH10978-DUP1)	*Source sample: 21H0747-02 (Duplicate)							Prepared & Analyzed: 08/18/2021			
% Solids	68.7	0.100	%		67.9				1.24	20	

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
21H0697-02	S-1 Voc	2 oz. WM Clear Glass Cool to 4° C
21H0697-04	S-2 Voc	2 oz. WM Clear Glass Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

VOA-CONT	Non-Compliant - the container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.
S-GC	Two surrogates are used for this analysis. One surrogate recovered within control limits therefore the analysis is acceptable.
S-08	The recovery of this surrogate was outside of QC limits.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
QC-LCS	LCS/LCS Dup recovery was above laboratory control limits. Sample does not contain any target compounds; therefore sample results are acceptable.
M-SPKM	The spike recovery is not within acceptance windows due to sample non-homogeneity, or matrix interference.
M-DUPS	The RPD between the native sample and the duplicate is outside of limits due to sample non-homogeneity
M-CRL	The RL check for this element recovered outside of control limits.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
CCV-H	The value reported is estimated due to its behavior during continuing calibration verification (>20% difference for average RF or >20% drift for linear or quadratic fit.) This value may be biased high.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

High Bias — High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

Non-Dir. — Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
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Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 21H0697

YOUR Information	Report to:	Invoice To:	Your Project ID	Turn-Around Time
Company: JM Cervino	SAME ☐	SAME ☐	1222 Speonk River Rd.	RUSH-Same Day
Address: College Point Queen	Name: Restoration &	Name: East Coast		RUSH-Next Day
New York	Company: Conservation	Company:	West Hampton NY	RUSH-Two Day
Phone.: 917-620-5287	Address: LLC	Address:		RUSH-Three Day
Contact: Dr James Cervino	East Coast Testing		West Hampton Prop.	RUSH-Four Day
E-mail: jamescervino@gmail.com	E-mail: Afranco2323Aol.com	E-mail	Samples from CT__NYX_NJ__	Standard (5-7day) XX

Report/Deliverable Type	
Summary Report	Yes
QA Report	Yes
CT RCP	
CT RCP DQA/DUE Pkg	
NY ASP A Package	
NY ASP B Package	
NJDEP Reduced Deliv	
Excel	Yes
NYSDEC EQuIS	
NJDEP SRP HazSite	
EQuIS	
GIS/KEY (std)	

YORK Regulatory Comp Excel
compared to:
NYSDEC Residential
NYSDEC 375 Protection GW

OTHER:

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Dr James M. Cervino
Samples Collected/Authorized By (Signature)
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part360-Routine
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part360-Baseline
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part360-Expanded No Dioxins/Furans
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part360-Expanded Full List
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM

Sample Identification	Date+Time Sampled	Matrix	Analysis Requested (List above includes common analysis)	Container Description
	8/13/2021	Soil	Full NYSDEC List	
S-1 Comp Select Fill	9:45 AM			
S-1 Voc				2- 8 Oz Glass
S-2 Comp RCA				2-2 Oz Glass
S-2 Voc				

Preservation (check all appliciable): 4°C____ Frozen____ HCl____ MeOH____ HNO_3____ H_2SO_4____ NaOH____ ZnAc____ Ascorbic Acid____ Other____

Special Instructions
Field Filtered ☐
Lab to Filter ☐

PID-VOC=ND

Samples Relinquished By: KBahyat — Date/Time: Aug 13, 2021

Samples Received By — Date/Time: 8/13/21 1320

Samples Received in LAB by — Date/Time: 8/13/21 1427 TD

Temperature on Receipt: 3.4 °C

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-42911-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
8/12/2021 12:15:27 AM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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Job ID: 160-42911-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-42911-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

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

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

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

RECEIPT

The sample was received on 7/28/2021 10:20 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.3º C.

VOLATILE ORGANIC COMPOUNDS BY GC/MS

Sample BF-08-072721 (160-42911-1) was analyzed for Volatile Organic Compounds by GC/MS in accordance with EPA SW-846 Method 8260C. The samples were prepared on 08/02/2021 and analyzed on 08/04/2021.

Job ID: 160-42911-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The following sample was received outside of the 48 hour holding time for preservation of the Core N One Capsules: BF-08-072721 (160-42911-1).

Preparation Batch 280-545086:
Methylene Chloride was detected in method blank MB 280-545086/5-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)
Sample BF-08-072721 (160-42911-1) was analyzed for Semivolatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 08/02/2021 and analyzed on 08/09/2021.

Preparation Batch 280-545008, Analytical Batch 280-545822:
The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside control limits for Naphthalene, Phenol, and Phenanthrene. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

ORGANOCHLORINE PESTICIDES (GC)
Sample BF-08-072721 (160-42911-1) was analyzed for Organochlorine Pesticides (GC) in accordance with SW- 846 Method 8081B. The samples were prepared on 07/29/2021 and analyzed on 07/30/2021.

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

POLYCHLORINATED BIPHENYLS (PCBS) BY GAS CHROMATOGRAPHY
Sample BF-08-072721 (160-42911-1) was analyzed for Polychlorinated Biphenyls (PCBs) by Gas Chromatography in accordance with SW 846. The samples were prepared on 07/29/2021 and analyzed on 07/30/2021.

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

CHLORINATED HERBICIDES
Sample BF-08-072721 (160-42911-1) was analyzed for chlorinated herbicides in accordance with EPA SW-846 Method 8151A. The samples were prepared on 07/30/2021 and analyzed on 08/02/2021.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Preparation Batch 460-793704, Analytical Batch 460-794019:
The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) recovered outside control limits for 2,4-D. This analyte was biased high in the LCS and LCSD and was not detected in the associated samples; therefore, the data was reported.

The %RPD between the primary and confirmation columns exceeded 40% for alpha-Chlordane. The lower value was reported and qualified in accordance with the laboratory's SOP: BF-08-072721 (160-42911-1).

Silvex (2,4,5-TP) failed the recovery criteria high for the MS of sample BF-08-072721MS (160-42911-1).

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

PERFLUORINATED ALKYL ACIDS (LC/MS)
Sample BF-08-072721 (160-42911-1) was analyzed for Perfluorinated Alkyl Acids (LC/MS) in accordance with EPA 537. The samples were prepared on 07/30/2021 and analyzed on 07/31/2021.

Job ID: 160-42911-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

Preparation Batch 320-511475, Analytical Batch 320-511961:
The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limit. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte: BF-08-072721 (160-42911-1).

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for several target analytes were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

The matrix spike/matrix spike duplicate (MS/MSD) precision for Perfluoroheptanesulfonic Acid (PFHpS) was outside control limits. Sample matrix interference is suspected.

The transition mass ion ratio was outside of the established limits for Perfluorohexanoic acid (PFHxA) in (CCVL 320-512178/2) as indicated by the "I" flag in the raw data. The analyte was in control in the CCV; therefore, the data was reported.

The transition mass ion ratio was outside of the established limits for Perfluorohexanoic acid (PFHxA) in (CCVL 320-511877/2) as indicated by the "I" flag in the raw data. The analyte was in in control in the CCV; therefore, the data was reported.

Preparation Batch 320-511475, Analytical Batch 320-512253:
Due to the high concentration of Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS), the matrix spike / matrix spike duplicate (MS/MSD) could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Results for samples (320-76807-A-2-A), (320-76807-A-2-B MS), and (320-76807-A-2-C MSD) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

METALS ICP/MS
Sample BF-08-072721 (160-42911-1) was analyzed for Metals ICP/MS in accordance with SW 846. The samples were prepared and analyzed on 08/03/2021.

Analytical Batch 460-794193:
Barium, Chromium, and Lead failed the recovery criteria high for the MS of sample 460-239941-9.

Barium, Chromium, Lead, and Nickel failed the recovery criteria high for the MSD of sample 460-239941-9.

Beryllium, Chromium and Zinc exceeded the RPD limit for the duplicate of sample 460-239941-9.

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

MERCURY
Sample BF-08-072721 (160-42911-1) was analyzed for mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 08/10/2021.

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

HEXAVALENT CHROMIUM
Sample BF-08-072721 (160-42911-1) was analyzed for hexavalent chromium in accordance with EPA SW-846 Method 3060A/7196A. The samples were prepared and analyzed on 08/05/2021.

Job ID: 160-42911-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

TRIVALENT CHROMIUM

Sample BF-08-072721 (160-42911-1) was analyzed for trivalent chromium in accordance with SW-846 Method 7196A_CR3. The samples were analyzed on 08/06/2021.

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

TOTAL CYANIDE

Sample BF-08-072721 (160-42911-1) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared and analyzed on 08/04/2021.

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

PERCENT SOLIDS

Sample BF-08-072721 (160-42911-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 07/29/2021 and 07/30/2021.

Percent Moisture exceeded the RPD limit for the duplicate of sample 460-239392-8

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☑Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Jake Pratt	Date: ~~7/26/21~~ 7.27.21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: FedEX	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: PRATT ~~B. Caudette~~
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☑ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOCs (8260C)	SVOCs (8270D)	Metals (6020A, 7471B, 7196A)	Pesticides (8081B)	Herbicides (8151A)	PCBs (8082A)	PFAS (EPA 537 Modified)	Total Cyanide (9012B)
~~BF-08-072621~~	~~27~~ Jul		C	S		N	N								
BF-08-072721	27/Jul	1200	C	S		N	N	X	X	X	X	X	X	X	X

Page 7 of 51

160-42911 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☑Disposal by Lab ☐Archive for _____ Months

Special Instructions/QC Requirements & Comments: All samples to be analyzed in accordance with the August, 2020 UFP-QAPP for the above referenced project.

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by: Jake Pratt	Company: FPM	Date/Time: 6-Jul-21 15:00	Received by: Fed FED EX	Company: Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Micha Konchinger	Company: EDA SDL Date/Time: JUL 28 2021 10:20
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-216771.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42911-1
Address: 4955 Yarrow Street,	Due Date Requested: 8/24/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C/5035A_FW NY Part 375 Compound List	8270D/3550C NY Part 375 Compound List	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BF-08-072721 (160-42911-1)	7/27/21	12:00 Eastern		Solid			X	X	X	5	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Michael Cunningham	7/29/21 17:30	ETA SDL	[illegible]	07/29/2021 0915	ETA Den
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.1 IR2 CF0.6

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-216773.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42911-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 8/24/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/Shake_Bath_14D PFAS, Standard List (21 Analytes)	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
BF-08-072721 (160-42911-1)	7/27/21	12:00 Eastern		Solid			X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Michael Kavanaugh	7/28/21 17:30	ETA SL		7/29/21 9:30 / 9:45	ETA SL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: Seal	Cooler Temperature(s) °C and Other Remarks: 4.0c

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-216772.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-42911-1
Address: 777 New Durham Road, ,	Due Date Requested: 8/24/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3050B NY Part 375 Analyte List	7471B/7471B_Prep	7196A/3060A Hexavalent Chromium - 7196	7196A_CR3	9012B/9012B_Prep	8081B/3546 (MOD) Target Compound List for Pesticide	8082A/3546 PCBs	8151A/8151A_SP Standard Herbicide List - 3 cmpds	Moisture					Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
BF-08-072721 (160-42911-1)	7/27/21	12:00 Eastern		Solid			X	X	X	X	X	X	X	X	X					5	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Kowalczyk	7/28/21 17:30	ETA SRL	Via Fedex	7/29/21 9:30	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: FD#9 - 3.6 = 3.1

Ver: 06/08/2021

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Sacramento Sample Receiving Notes

160-42911 Field Sheet

Job: _____

Tracking # : 4957 0227 5165

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: L-05 Corr. Factor: (+ / -) — °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal: Seal

Cooler ID: —

Temp Observed: 4.0 °C Corrected: 4.0 °C

From: Temp Blank ☐ Sample ☑

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials: LS Date: 7/29/21

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
Sample containers have legible labels?	☑	☐	☐
Sample custody seal?	☐	☐	☑
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: LS Date: 7/29/21

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
Samples received within hold time?	☑	☐	☐
NCM Filed?	☐	☐	☑
Log Release checked in TALS?	☑	☐	☐

Initials: LS Date: 7/29/21

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42911-1

Login Number: 42911
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42911-1

Login Number: 42911
List Number: 4
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 07/29/21 07:52 PM

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42911-1

Login Number: 42911
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 07/29/21 02:39 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1°C IR9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-42911-1

Login Number: 42911
List Number: 3
Creator: Cahill, Nicholas P

List Source: Eurofins TestAmerica, Sacramento
List Creation: 07/29/21 04:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
M	Manual integrated compound.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Undetected at the Limit of Detection.

LCMS

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL EDI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL EDI
8151A	Herbicides (GC)	SW846	TAL EDI
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
6020B	Metals (ICP/MS)	SW846	TAL EDI
7471B	Mercury (CVAA)	SW846	TAL EDI
7196A	Chromium, Hexavalent	SW846	TAL EDI
7196A	Chromium, Trivalent (Colorimetric)	SW846	TAL EDI
9012B	Cyanide, Total andor Amenable	SW846	TAL EDI
Moisture	Percent Moisture	EPA	TAL DEN
Moisture	Percent Moisture	EPA	TAL EDI
Moisture	Percent Moisture	EPA	TAL SAC
3050B	Preparation, Metals	SW846	TAL EDI
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	TAL EDI
3546	Microwave Extraction	SW846	TAL EDI
3550C	Ultrasonic Extraction	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL EDI
8151A	Extraction (Herbicides)	SW846	TAL EDI
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL EDI
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-42911-1	BF-08-072721	Solid	07/27/21 12:00	07/28/21 10:20

Client Sample ID: BF-08-072721

Date Collected: 07/27/21 12:00
Date Received: 07/28/21 10:20

Lab Sample ID: 160-42911-1

Matrix: Solid
Percent Solids: 85.7

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		7.8	1.3	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
4,4'-DDE	ND		7.8	0.92	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
4,4'-DDT	**3.1**	**J**	7.8	1.4	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Aldrin	ND		7.8	1.2	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
alpha-BHC	ND		2.3	0.79	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
alpha-Chlordane	**4.6**	**J p**	7.8	1.2	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
beta-BHC	ND		2.3	0.87	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
delta-BHC	ND		2.3	0.48	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Dieldrin	ND		2.3	1.0	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endosulfan I	ND		7.8	1.2	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endosulfan II	ND		7.8	2.0	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endosulfan sulfate	ND		7.8	0.98	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endrin	ND		7.8	1.1	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endrin aldehyde	ND		7.8	1.8	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Endrin ketone	ND		7.8	1.5	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
gamma-BHC (Lindane)	ND		2.3	0.72	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
gamma-Chlordane	**4.7**	**J**	7.8	1.4	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Heptachlor	ND		7.8	0.92	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Heptachlor epoxide	ND		7.8	1.2	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Methoxychlor	ND		7.8	1.8	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1
Toxaphene	ND		78	28	ug/Kg	☼	07/29/21 17:03	07/30/21 11:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*92*		*10 - 150*	*07/29/21 17:03*	*07/30/21 11:46*	*1*
Tetrachloro-m-xylene	*84*		*10 - 133*	*07/29/21 17:03*	*07/30/21 11:46*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	10	U M	78	10	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1221	10	U M	78	10	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1232	10	U M	78	10	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1242	10	U M	78	10	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1248	10	U M	78	10	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1254	11	U M	78	11	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1260	11	U M	78	11	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1262	11	U M	78	11	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
PCB-1268	11	U M	78	11	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1
Polychlorinated biphenyls, Total	11	U	78	11	ug/Kg	☼	07/29/21 17:00	07/30/21 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*37 - 150*	*07/29/21 17:00*	*07/30/21 08:04*	*1*
Tetrachloro-m-xylene	*82*		*54 - 150*	*07/29/21 17:00*	*07/30/21 08:04*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND	F1	39	4.0	ug/Kg	☼	07/30/21 23:58	08/02/21 13:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*119*		*65 - 150*	*07/30/21 23:58*	*08/02/21 13:09*	*1*

Client Sample ID: BF-08-072721

Lab Sample ID: 160-42911-1
Date Collected: 07/27/21 12:00
Matrix: Solid
Date Received: 07/28/21 10:20
Percent Solids: 85.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.8**		1.1	0.11	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Barium	**30**		2.2	0.16	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Beryllium	**0.29**	**J**	0.44	0.063	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Cadmium	ND		1.1	0.12	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Chromium	**23**		2.2	0.19	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Copper	**13**		2.2	0.24	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Lead	**23**		0.66	0.22	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Manganese	**180**		4.4	0.44	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Nickel	**9.3**		2.2	0.21	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Selenium	**0.24**	**J**	1.4	0.13	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Silver	ND		1.1	0.098	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1
Zinc	**33**		8.8	2.5	mg/Kg	☼	08/03/21 02:59	08/03/21 16:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.048**		0.018	0.0042	mg/Kg	☼	08/10/21 03:07	08/10/21 06:28	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		2.4	1.0	mg/Kg	☼	08/05/21 08:33	08/05/21 16:50	1
Cyanide, Total	ND		0.23	0.13	mg/Kg	☼	08/04/21 13:51	08/04/21 20:42	1

Client Sample ID: BF-08-072721

Lab Sample ID: 160-42911-1
Date Collected: 07/27/21 12:00
Matrix: Solid
Date Received: 07/28/21 10:20
Percent Solids: 92.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20	0.046	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluoropentanoic acid (PFPeA)	**0.045**	**J**	0.20	0.041	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorohexanoic acid (PFHxA)	**0.040**	**J**	0.20	0.031	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluoroheptanoic acid (PFHpA)	**0.064**	**J**	0.20	0.038	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorooctanoic acid (PFOA)	**0.12**	**J**	0.20	0.053	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorononanoic acid (PFNA)	**0.059**	**J**	0.20	0.022	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorodecanoic acid (PFDA)	**0.084**	**J**	0.20	0.048	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluoroundecanoic acid (PFUnA)	**0.045**	**J**	0.20	0.042	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorododecanoic acid (PFDoA)	**0.032**	**J**	0.20	0.030	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20	0.021	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorohexanesulfonic acid (PFHxS)	**0.051**	**J I**	0.20	0.029	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20	0.049	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorooctanesulfonic acid (PFOS)	**0.40**		0.20	0.043	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.052	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.033	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.023	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1

Client Sample ID: BF-08-072721

Date Collected: 07/27/21 12:00
Date Received: 07/28/21 10:20

Lab Sample ID: 160-42911-1

Matrix: Solid
Percent Solids: 92.5

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.048	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
6:2 FTS	ND		0.20	0.027	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1
8:2 FTS	ND		0.20	0.035	ug/Kg	☼	07/30/21 04:34	07/31/21 16:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*79*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C5 PFPeA	*80*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C2 PFHxA	*97*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C4 PFHpA	*89*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C4 PFOA	*95*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C5 PFNA	*90*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C2 PFDA	*98*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C2 PFUnA	*91*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C2 PFDoA	*85*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C2 PFTeDA	*87*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C3 PFBS	*84*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
18O2 PFHxS	*82*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C4 PFOS	*85*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
13C8 FOSA	*92*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
d3-NMeFOSAA	*88*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
d5-NEtFOSAA	*96*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
M2-6:2 FTS	*116*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*
M2-8:2 FTS	*124*		*25 - 150*	*07/30/21 04:34*	*07/31/21 16:16*	*1*

Client Sample ID: BF-08-072721

Date Collected: 07/27/21 12:00
Date Received: 07/28/21 10:20

Lab Sample ID: 160-42911-1

Matrix: Solid
Percent Solids: 93.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	4.8	0.49	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Methylene Chloride	**0.76**	**J H B**	4.8	0.32	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Acetone	ND	H	76	26	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,1-Dichloroethene	ND	H	4.8	0.26	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,1-Dichloroethane	ND	H	4.8	0.38	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
trans-1,2-Dichloroethene	ND	H	2.4	0.37	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
cis-1,2-Dichloroethene	ND	H	2.4	0.41	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Chloroform	ND	H	9.6	0.32	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,2-Dichloroethane	ND	H	4.8	0.38	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
2-Butanone (MEK)	ND	H	19	6.1	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,1,1-Trichloroethane	ND	H	4.8	0.32	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Carbon tetrachloride	ND	H	4.8	0.13	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Trichloroethene	ND	H	4.8	0.33	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Benzene	ND	H	4.8	0.18	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Tetrachloroethene	ND	H	4.8	0.17	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Toluene	ND	H	4.8	0.61	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Chlorobenzene	ND	H	4.8	0.14	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Ethylbenzene	ND	H	4.8	0.44	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Xylenes, Total	ND	H	4.8	0.48	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
Methyl tert-butyl ether	ND	H	19	0.17	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

Client Sample ID: BF-08-072721

Date Collected: 07/27/21 12:00
Date Received: 07/28/21 10:20

Lab Sample ID: 160-42911-1

Matrix: Solid
Percent Solids: 93.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND	H	4.8	0.39	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,4-Dichlorobenzene	ND	H	4.8	0.46	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,2-Dichlorobenzene	ND	H	4.8	0.45	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,4-Dioxane	ND	H	480	8.0	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,2,4-Trimethylbenzene	ND	H	4.8	1.3	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
1,3,5-Trimethylbenzene	ND	H	4.8	0.60	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
N-Propylbenzene	ND	H	4.8	0.45	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
sec-Butylbenzene	ND	H	4.8	0.50	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
tert-Butylbenzene	ND	H	4.8	0.44	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1
n-Butylbenzene	ND	H	4.8	0.48	ug/Kg	☼	08/02/21 14:17	08/04/21 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*58 - 140*	*08/02/21 14:17*	*08/04/21 19:25*	*1*
Toluene-d8 (Surr)	*100*		*80 - 126*	*08/02/21 14:17*	*08/04/21 19:25*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 121*	*08/02/21 14:17*	*08/04/21 19:25*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND	F1	350	19	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
2-Methylphenol	ND		350	14	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Naphthalene	ND	F1	350	33	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Acenaphthylene	ND		350	88	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Acenaphthene	**73**	**J**	350	11	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Dibenzofuran	**30**	**J**	350	22	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Fluorene	**48**	**J**	350	19	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Phenanthrene	**530**	**F1**	350	18	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Anthracene	**110**	**J**	350	18	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Fluoranthene	**710**		350	39	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Pyrene	ND		350	13	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Benzo[a]anthracene	**310**	**J**	350	22	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Chrysene	**310**	**J**	350	29	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Benzo[b]fluoranthene	**380**		350	28	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Benzo[k]fluoranthene	**150**	**J**	350	43	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Benzo[a]pyrene	**320**	**J**	350	22	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Indeno[1,2,3-cd]pyrene	**260**	**J**	350	24	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Dibenz(a,h)anthracene	**47**	**J**	350	20	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1
Benzo[g,h,i]perylene	**210**	**J**	350	17	ug/Kg	☼	08/02/21 10:34	08/09/21 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*48*		*46 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*
Phenol-d5 (Surr)	*57*		*46 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*
Terphenyl-d14 (Surr)	*96*		*46 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*35 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*
2-Fluorophenol (Surr)	*51*		*43 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*
2-Fluorobiphenyl	*67*		*46 - 120*	*08/02/21 10:34*	*08/09/21 18:25*	*1*

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-42911-1
Project/Site: BNL Decommissioning Project

Client Sample ID: BF-08-072721
Lab Sample ID: 160-42911-1
Date Collected: 07/27/21 12:00
Matrix: Solid
Date Received: 07/28/21 10:20
Percent Solids: 93.0

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	23		2.0	2.0	mg/Kg			08/06/21 06:00	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-545086/5-A
Matrix: Solid
Analysis Batch: 545344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545086

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.51	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Methylene Chloride	0.427	J	5.0	0.34	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Acetone	ND		80	27	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,1-Dichloroethene	ND		5.0	0.27	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,1-Dichloroethane	ND		5.0	0.40	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
cis-1,2-Dichloroethene	ND		2.5	0.43	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Chloroform	ND		10	0.33	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,2-Dichloroethane	ND		5.0	0.40	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
2-Butanone (MEK)	ND		20	6.4	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,1,1-Trichloroethane	ND		5.0	0.33	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Carbon tetrachloride	ND		5.0	0.13	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Trichloroethene	ND		5.0	0.35	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Benzene	ND		5.0	0.18	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Tetrachloroethene	ND		5.0	0.18	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Toluene	ND		5.0	0.64	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Chlorobenzene	ND		5.0	0.15	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Ethylbenzene	ND		5.0	0.46	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Xylenes, Total	ND		5.0	0.50	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
Methyl tert-butyl ether	ND		20	0.17	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,3-Dichlorobenzene	ND		5.0	0.41	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,4-Dichlorobenzene	ND		5.0	0.49	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,2-Dichlorobenzene	ND		5.0	0.47	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,4-Dioxane	ND		500	8.4	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,2,4-Trimethylbenzene	ND		5.0	1.4	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
1,3,5-Trimethylbenzene	ND		5.0	0.62	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
N-Propylbenzene	ND		5.0	0.47	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
sec-Butylbenzene	ND		5.0	0.53	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
tert-Butylbenzene	ND		5.0	0.46	ug/Kg		08/02/21 14:17	08/04/21 15:44	1
n-Butylbenzene	ND		5.0	0.51	ug/Kg		08/02/21 14:17	08/04/21 15:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*58 - 140*	*08/02/21 14:17*	*08/04/21 15:44*	*1*
Toluene-d8 (Surr)	*98*		*80 - 126*	*08/02/21 14:17*	*08/04/21 15:44*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 121*	*08/02/21 14:17*	*08/04/21 15:44*	*1*

Lab Sample ID: LCS 280-545086/1-A
Matrix: Solid
Analysis Batch: 545344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	50.0	44.4		ug/Kg		89	43 - 145
Methylene Chloride	50.0	46.8		ug/Kg		94	76 - 136
Acetone	200	165		ug/Kg		83	65 - 150
1,1-Dichloroethene	50.0	47.8		ug/Kg		96	79 - 135
1,1-Dichloroethane	50.0	44.1		ug/Kg		88	70 - 135
trans-1,2-Dichloroethene	50.0	50.1		ug/Kg		100	77 - 135
cis-1,2-Dichloroethene	50.0	48.7		ug/Kg		97	76 - 135

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 280-545086/1-A
Matrix: Solid
Analysis Batch: 545344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545086

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloroform			50.0	44.6		ug/Kg		89	73 - 123		
1,2-Dichloroethane			50.0	41.1		ug/Kg		82	69 - 135		
2-Butanone (MEK)			200	147		ug/Kg		74	45 - 177		
1,1,1-Trichloroethane			50.0	48.4		ug/Kg		97	70 - 135		
Carbon tetrachloride			50.0	48.0		ug/Kg		96	69 - 138		
Trichloroethene			50.0	45.1		ug/Kg		90	77 - 135		
Benzene			50.0	46.8		ug/Kg		94	75 - 135		
Tetrachloroethene			50.0	47.9		ug/Kg		96	76 - 135		
Toluene			50.0	44.8		ug/Kg		90	77 - 122		
Chlorobenzene			50.0	48.0		ug/Kg		96	78 - 135		
Ethylbenzene			50.0	49.0		ug/Kg		98	73 - 125		
m-Xylene & p-Xylene			50.0	46.9		ug/Kg		94	77 - 135		
o-Xylene			50.0	47.4		ug/Kg		95	75 - 135		
Methyl tert-butyl ether			50.0	47.1		ug/Kg		94	71 - 141		
1,3-Dichlorobenzene			50.0	47.8		ug/Kg		96	69 - 135		
1,4-Dichlorobenzene			50.0	46.1		ug/Kg		92	73 - 135		
1,2-Dichlorobenzene			50.0	48.1		ug/Kg		96	73 - 135		
1,4-Dioxane			1000	906		ug/Kg		91	52 - 135		
1,2,4-Trimethylbenzene			50.0	46.3		ug/Kg		93	67 - 135		
1,3,5-Trimethylbenzene			50.0	45.4		ug/Kg		91	65 - 135		
N-Propylbenzene			50.0	49.0		ug/Kg		98	67 - 135		
sec-Butylbenzene			50.0	47.6		ug/Kg		95	69 - 135		
tert-Butylbenzene			50.0	46.5		ug/Kg		93	66 - 135		
n-Butylbenzene			50.0	46.0		ug/Kg		92	68 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*58 - 140*
Toluene-d8 (Surr)	*98*		*80 - 126*
Dibromofluoromethane (Surr)	*100*		*75 - 121*

Lab Sample ID: LCSD 280-545086/3-A
Matrix: Solid
Analysis Batch: 545344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545086

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride			50.0	48.5		ug/Kg		97	43 - 145	9	24
Methylene Chloride			50.0	52.3		ug/Kg		105	76 - 136	11	21
Acetone			200	182		ug/Kg		91	65 - 150	9	28
1,1-Dichloroethene			50.0	53.5		ug/Kg		107	79 - 135	11	20
1,1-Dichloroethane			50.0	48.4		ug/Kg		97	70 - 135	9	20
trans-1,2-Dichloroethene			50.0	55.6		ug/Kg		111	77 - 135	11	20
cis-1,2-Dichloroethene			50.0	53.5		ug/Kg		107	76 - 135	9	20
Chloroform			50.0	49.3		ug/Kg		99	73 - 123	10	20
1,2-Dichloroethane			50.0	45.1		ug/Kg		90	69 - 135	9	20
2-Butanone (MEK)			200	160		ug/Kg		80	45 - 177	9	32
1,1,1-Trichloroethane			50.0	53.1		ug/Kg		106	70 - 135	9	20
Carbon tetrachloride			50.0	53.4		ug/Kg		107	69 - 138	11	20
Trichloroethene			50.0	49.6		ug/Kg		99	77 - 135	9	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-545086/3-A
Matrix: Solid
Analysis Batch: 545344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 545086

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	51.6		ug/Kg		103	75 - 135	10	20
Tetrachloroethene			50.0	52.5		ug/Kg		105	76 - 135	9	20
Toluene			50.0	49.6		ug/Kg		99	77 - 122	10	20
Chlorobenzene			50.0	52.7		ug/Kg		105	78 - 135	9	20
Ethylbenzene			50.0	54.0		ug/Kg		108	73 - 125	10	20
m-Xylene & p-Xylene			50.0	51.7		ug/Kg		103	77 - 135	10	20
o-Xylene			50.0	52.6		ug/Kg		105	75 - 135	10	20
Methyl tert-butyl ether			50.0	51.3		ug/Kg		103	71 - 141	8	20
1,3-Dichlorobenzene			50.0	51.9		ug/Kg		104	69 - 135	8	20
1,4-Dichlorobenzene			50.0	48.7		ug/Kg		97	73 - 135	6	22
1,2-Dichlorobenzene			50.0	51.8		ug/Kg		104	73 - 135	7	20
1,4-Dioxane			1000	1010		ug/Kg		101	52 - 135	11	30
1,2,4-Trimethylbenzene			50.0	50.1		ug/Kg		100	67 - 135	8	20
1,3,5-Trimethylbenzene			50.0	50.0		ug/Kg		100	65 - 135	10	21
N-Propylbenzene			50.0	53.9		ug/Kg		108	67 - 135	9	22
sec-Butylbenzene			50.0	52.0		ug/Kg		104	69 - 135	9	22
tert-Butylbenzene			50.0	50.8		ug/Kg		102	66 - 135	9	22
n-Butylbenzene			50.0	50.0		ug/Kg		100	68 - 135	8	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*58 - 140*
Toluene-d8 (Surr)	*98*		*80 - 126*
Dibromofluoromethane (Surr)	*99*		*75 - 121*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-545008/1-A
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545008

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		330	18	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
2-Methylphenol	ND		330	13	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Pentachlorophenol	ND		1600	330	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Naphthalene	ND		330	31	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Acenaphthylene	ND		330	82	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Acenaphthene	ND		330	10	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Dibenzofuran	ND		330	20	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Fluorene	ND		330	18	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Hexachlorobenzene	ND		330	29	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Phenanthrene	ND		330	17	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Anthracene	ND		330	17	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Fluoranthene	ND		330	36	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Pyrene	ND		330	12	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Benzo[a]anthracene	ND		330	20	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Chrysene	ND		330	27	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		08/02/21 10:34	08/09/21 17:40	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-545008/1-A
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 545008

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		330	20	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		08/02/21 10:34	08/09/21 17:40	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		08/02/21 10:34	08/09/21 17:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*57*		*46 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*
Phenol-d5 (Surr)	*59*		*46 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*
Terphenyl-d14 (Surr)	*92*		*46 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*
2,4,6-Tribromophenol (Surr)	*64*		*35 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*
2-Fluorophenol (Surr)	*58*		*43 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*
2-Fluorobiphenyl	*64*		*46 - 120*	*08/02/21 10:34*	*08/09/21 17:40*	*1*

Lab Sample ID: LCS 280-545008/2-A
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 545008

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	2670	1910		ug/Kg		72	63 - 120
2-Methylphenol	2670	1940		ug/Kg		73	61 - 120
Pentachlorophenol	5330	4470		ug/Kg		84	50 - 120
Naphthalene	2670	1900		ug/Kg		71	59 - 120
Acenaphthylene	2670	2180		ug/Kg		82	64 - 120
Acenaphthene	2670	2060		ug/Kg		77	62 - 120
Dibenzofuran	2670	2180		ug/Kg		82	65 - 120
Fluorene	2670	2210		ug/Kg		83	66 - 120
Hexachlorobenzene	2670	2380		ug/Kg		89	65 - 120
Phenanthrene	2670	2380		ug/Kg		89	67 - 120
Anthracene	2670	2370		ug/Kg		89	66 - 120
Fluoranthene	2670	2640		ug/Kg		99	64 - 120
Pyrene	2670	2440		ug/Kg		92	66 - 120
Benzo[a]anthracene	2670	2540		ug/Kg		95	64 - 120
Chrysene	2670	2470		ug/Kg		93	65 - 120
Benzo[b]fluoranthene	2670	2460		ug/Kg		92	58 - 120
Benzo[k]fluoranthene	2670	2590		ug/Kg		97	62 - 120
Benzo[a]pyrene	2670	2580		ug/Kg		97	65 - 120
Indeno[1,2,3-cd]pyrene	2670	2480		ug/Kg		93	46 - 120
Dibenz(a,h)anthracene	2670	2470		ug/Kg		93	56 - 120
Benzo[g,h,i]perylene	2670	2520		ug/Kg		94	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*72*		*46 - 120*
Phenol-d5 (Surr)	*74*		*46 - 120*
Terphenyl-d14 (Surr)	*100*		*46 - 120*
2,4,6-Tribromophenol (Surr)	*92*		*35 - 120*
2-Fluorophenol (Surr)	*75*		*43 - 120*
2-Fluorobiphenyl	*82*		*46 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-42911-1 MS
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 545008

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	ND	F1	2720	1870		ug/Kg	☼	69	63 - 120
2-Methylphenol	ND		2720	2010		ug/Kg	☼	74	61 - 120
Pentachlorophenol	ND		5440	4020		ug/Kg	☼	74	50 - 120
Naphthalene	ND	F1	2720	1880		ug/Kg	☼	69	59 - 120
Acenaphthylene	ND		2720	2240		ug/Kg	☼	82	64 - 120
Acenaphthene	73	J	2720	2130		ug/Kg	☼	75	62 - 120
Dibenzofuran	30	J	2720	2170		ug/Kg	☼	79	65 - 120
Fluorene	48	J	2720	2160		ug/Kg	☼	78	66 - 120
Hexachlorobenzene	ND		2720	2210		ug/Kg	☼	81	65 - 120
Phenanthrene	530	F1	2720	2300	F1	ug/Kg	☼	65	67 - 120
Anthracene	110	J	2720	2160		ug/Kg	☼	76	66 - 120
Fluoranthene	710		2720	2680		ug/Kg	☼	72	64 - 120
Pyrene	ND		2720	2380		ug/Kg	☼	87	66 - 120
Benzo[a]anthracene	310	J	2720	2410		ug/Kg	☼	77	64 - 120
Chrysene	310	J	2720	2430		ug/Kg	☼	78	65 - 120
Benzo[b]fluoranthene	380		2720	2540		ug/Kg	☼	79	58 - 120
Benzo[k]fluoranthene	150	J	2720	2370		ug/Kg	☼	82	62 - 120
Benzo[a]pyrene	320	J	2720	2550		ug/Kg	☼	82	65 - 120
Indeno[1,2,3-cd]pyrene	260	J	2720	2030		ug/Kg	☼	65	46 - 120
Dibenz(a,h)anthracene	47	J	2720	1910		ug/Kg	☼	68	56 - 120
Benzo[g,h,i]perylene	210	J	2720	1990		ug/Kg	☼	65	58 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*69*		*46 - 120*
Phenol-d5 (Surr)	*75*		*46 - 120*
Terphenyl-d14 (Surr)	*83*		*46 - 120*
2,4,6-Tribromophenol (Surr)	*82*		*35 - 120*
2-Fluorophenol (Surr)	*71*		*43 - 120*
2-Fluorobiphenyl	*82*		*46 - 120*

Lab Sample ID: 160-42911-1 MSD
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 545008

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	ND	F1	2760	1600	F1	ug/Kg	☼	58	63 - 120	15	30
2-Methylphenol	ND		2760	1720		ug/Kg	☼	62	61 - 120	16	30
Pentachlorophenol	ND		5510	4380		ug/Kg	☼	80	50 - 120	9	30
Naphthalene	ND	F1	2760	1550	F1	ug/Kg	☼	56	59 - 120	19	30
Acenaphthylene	ND		2760	2150		ug/Kg	☼	78	64 - 120	4	30
Acenaphthene	73	J	2760	2060		ug/Kg	☼	72	62 - 120	3	30
Dibenzofuran	30	J	2760	2190		ug/Kg	☼	78	65 - 120	1	30
Fluorene	48	J	2760	2230		ug/Kg	☼	79	66 - 120	3	30
Hexachlorobenzene	ND		2760	2420		ug/Kg	☼	88	65 - 120	9	30
Phenanthrene	530	F1	2760	2520		ug/Kg	☼	72	67 - 120	9	30
Anthracene	110	J	2760	2410		ug/Kg	☼	84	66 - 120	11	30
Fluoranthene	710		2760	2850		ug/Kg	☼	78	64 - 120	6	30
Pyrene	ND		2760	2610		ug/Kg	☼	95	66 - 120	9	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-42911-1 MSD
Matrix: Solid
Analysis Batch: 545822

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 545008

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	310	J	2760	2650		ug/Kg	☼	85	64 - 120	10	30
Chrysene	310	J	2760	2550		ug/Kg	☼	81	65 - 120	5	30
Benzo[b]fluoranthene	380		2760	2730		ug/Kg	☼	85	58 - 120	7	30
Benzo[k]fluoranthene	150	J	2760	2490		ug/Kg	☼	85	62 - 120	5	30
Benzo[a]pyrene	320	J	2760	2730		ug/Kg	☼	87	65 - 120	7	30
Indeno[1,2,3-cd]pyrene	260	J	2760	2330		ug/Kg	☼	75	46 - 120	14	30
Dibenz(a,h)anthracene	47	J	2760	2160		ug/Kg	☼	77	56 - 120	12	30
Benzo[g,h,i]perylene	210	J	2760	2180		ug/Kg	☼	71	58 - 120	9	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*59*		*46 - 120*
Phenol-d5 (Surr)	*63*		*46 - 120*
Terphenyl-d14 (Surr)	*95*		*46 - 120*
2,4,6-Tribromophenol (Surr)	*91*		*35 - 120*
2-Fluorophenol (Surr)	*60*		*43 - 120*
2-Fluorobiphenyl	*73*		*46 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 460-793396/1-A
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 793396

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		6.7	1.1	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
4,4'-DDE	ND		6.7	0.79	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
4,4'-DDT	ND		6.7	1.2	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Aldrin	ND		6.7	1.0	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
alpha-BHC	ND		2.0	0.68	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
alpha-Chlordane	ND		6.7	1.1	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
beta-BHC	ND		2.0	0.75	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
delta-BHC	ND		2.0	0.41	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Dieldrin	ND		2.0	0.87	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endosulfan I	ND		6.7	1.0	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endosulfan II	ND		6.7	1.7	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endosulfan sulfate	ND		6.7	0.84	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endrin	ND		6.7	0.96	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endrin aldehyde	ND		6.7	1.6	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Endrin ketone	ND		6.7	1.3	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
gamma-BHC (Lindane)	ND		2.0	0.62	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
gamma-Chlordane	ND		6.7	1.2	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Heptachlor	ND		6.7	0.79	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Heptachlor epoxide	ND		6.7	1.0	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Methoxychlor	ND		6.7	1.5	ug/Kg		07/29/21 17:03	07/30/21 09:06	1
Toxaphene	ND		67	24	ug/Kg		07/29/21 17:03	07/30/21 09:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*111*		*10 - 150*	*07/29/21 17:03*	*07/30/21 09:06*	*1*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 460-793396/1-A
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 793396

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		10 - 133	07/29/21 17:03	07/30/21 09:06	1

Lab Sample ID: LCS 460-793396/2-A
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 793396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	133	172		ug/Kg		129	70 - 140
4,4'-DDE	133	151		ug/Kg		113	71 - 137
4,4'-DDT	133	113		ug/Kg		85	63 - 131
Aldrin	133	147		ug/Kg		110	74 - 140
alpha-BHC	133	150		ug/Kg		112	72 - 142
alpha-Chlordane	133	146		ug/Kg		110	70 - 136
beta-BHC	133	147		ug/Kg		111	65 - 137
delta-BHC	133	154		ug/Kg		116	70 - 143
Dieldrin	133	150		ug/Kg		113	70 - 135
Endosulfan I	133	147		ug/Kg		110	68 - 135
Endosulfan II	133	156		ug/Kg		117	64 - 130
Endosulfan sulfate	133	164		ug/Kg		123	66 - 143
Endrin	133	136		ug/Kg		102	68 - 136
Endrin aldehyde	133	145		ug/Kg		109	68 - 132
Endrin ketone	133	151		ug/Kg		113	60 - 150
gamma-BHC (Lindane)	133	148		ug/Kg		111	70 - 134
gamma-Chlordane	133	148		ug/Kg		111	71 - 137
Heptachlor	133	136		ug/Kg		102	69 - 134
Heptachlor epoxide	133	145		ug/Kg		108	70 - 135
Methoxychlor	133	110		ug/Kg		83	57 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	82		10 - 150
Tetrachloro-m-xylene	79		10 - 133

Lab Sample ID: LCSD 460-793396/3-A
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 793396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	133	168		ug/Kg		126	70 - 140	2	30
4,4'-DDE	133	151		ug/Kg		113	71 - 137	0	30
4,4'-DDT	133	111		ug/Kg		83	63 - 131	2	30
Aldrin	133	147		ug/Kg		110	74 - 140	0	30
alpha-BHC	133	149		ug/Kg		112	72 - 142	1	30
alpha-Chlordane	133	146		ug/Kg		109	70 - 136	0	30
beta-BHC	133	147		ug/Kg		110	65 - 137	0	30
delta-BHC	133	154		ug/Kg		115	70 - 143	0	30
Dieldrin	133	148		ug/Kg		111	70 - 135	1	30
Endosulfan I	133	146		ug/Kg		110	68 - 135	0	30
Endosulfan II	133	154		ug/Kg		115	64 - 130	1	30

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 460-793396/3-A
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 793396

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endosulfan sulfate			133	163		ug/Kg		122	66 - 143	0	30
Endrin			133	129		ug/Kg		97	68 - 136	5	30
Endrin aldehyde			133	146		ug/Kg		109	68 - 132	1	30
Endrin ketone			133	153		ug/Kg		115	60 - 150	2	30
gamma-BHC (Lindane)			133	147		ug/Kg		111	70 - 134	0	30
gamma-Chlordane			133	147		ug/Kg		110	71 - 137	1	30
Heptachlor			133	134		ug/Kg		100	69 - 134	2	30
Heptachlor epoxide			133	143		ug/Kg		108	70 - 135	1	30
Methoxychlor			133	107		ug/Kg		80	57 - 135	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*83*		*10 - 150*
Tetrachloro-m-xylene	*80*		*10 - 133*

Lab Sample ID: 160-42911-1 MS
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 793396

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		156	163		ug/Kg	☼	105	70 - 140		
4,4'-DDE	ND		156	145		ug/Kg	☼	93	71 - 137		
4,4'-DDT	3.1	J	156	116		ug/Kg	☼	72	63 - 131		
Aldrin	ND		156	142		ug/Kg	☼	91	74 - 140		
alpha-BHC	ND		156	143		ug/Kg	☼	92	72 - 142		
alpha-Chlordane	4.6	J p	156	145		ug/Kg	☼	91	70 - 136		
beta-BHC	ND		156	141		ug/Kg	☼	91	65 - 137		
delta-BHC	ND		156	149		ug/Kg	☼	96	70 - 143		
Dieldrin	ND		156	144		ug/Kg	☼	93	70 - 135		
Endosulfan I	ND		156	141		ug/Kg	☼	91	68 - 135		
Endosulfan II	ND		156	150		ug/Kg	☼	96	64 - 130		
Endosulfan sulfate	ND		156	160		ug/Kg	☼	103	66 - 143		
Endrin	ND		156	134		ug/Kg	☼	86	68 - 136		
Endrin aldehyde	ND		156	139		ug/Kg	☼	89	68 - 132		
Endrin ketone	ND		156	151		ug/Kg	☼	97	60 - 150		
gamma-BHC (Lindane)	ND		156	142		ug/Kg	☼	91	70 - 134		
gamma-Chlordane	4.7	J	156	142		ug/Kg	☼	88	71 - 137		
Heptachlor	ND		156	132		ug/Kg	☼	85	69 - 134		
Heptachlor epoxide	ND		156	139		ug/Kg	☼	90	70 - 135		
Methoxychlor	ND		156	111		ug/Kg	☼	71	57 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*72*		*10 - 150*
Tetrachloro-m-xylene	*64*		*10 - 133*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 160-42911-1 MSD
Matrix: Solid
Analysis Batch: 793459

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 793396

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		156	157		ug/Kg	☼	101	70 - 140	4	30
4,4'-DDE	ND		156	141		ug/Kg	☼	90	71 - 137	3	30
4,4'-DDT	3.1	J	156	112		ug/Kg	☼	70	63 - 131	3	30
Aldrin	ND		156	138		ug/Kg	☼	89	74 - 140	3	30
alpha-BHC	ND		156	139		ug/Kg	☼	89	72 - 142	3	30
alpha-Chlordane	4.6	J p	156	142		ug/Kg	☼	88	70 - 136	2	30
beta-BHC	ND		156	137		ug/Kg	☼	88	65 - 137	3	30
delta-BHC	ND		156	144		ug/Kg	☼	93	70 - 143	3	30
Dieldrin	ND		156	140		ug/Kg	☼	90	70 - 135	3	30
Endosulfan I	ND		156	137		ug/Kg	☼	88	68 - 135	3	30
Endosulfan II	ND		156	145		ug/Kg	☼	93	64 - 130	3	30
Endosulfan sulfate	ND		156	156		ug/Kg	☼	100	66 - 143	3	30
Endrin	ND		156	129		ug/Kg	☼	83	68 - 136	3	30
Endrin aldehyde	ND		156	135		ug/Kg	☼	87	68 - 132	3	30
Endrin ketone	ND		156	147		ug/Kg	☼	94	60 - 150	3	30
gamma-BHC (Lindane)	ND		156	138		ug/Kg	☼	89	70 - 134	3	30
gamma-Chlordane	4.7	J	156	138		ug/Kg	☼	86	71 - 137	3	30
Heptachlor	ND		156	129		ug/Kg	☼	83	69 - 134	3	30
Heptachlor epoxide	ND		156	136		ug/Kg	☼	87	70 - 135	3	30
Methoxychlor	ND		156	107		ug/Kg	☼	69	57 - 135	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*71*		*10 - 150*
Tetrachloro-m-xylene	*64*		*10 - 133*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 460-793395/1-A
Matrix: Solid
Analysis Batch: 793487

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 793395

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	8.9	U M	67	8.9	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1221	8.9	U M	67	8.9	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1232	8.9	U M	67	8.9	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1242	8.9	U M	67	8.9	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1248	8.9	U M	67	8.9	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1254	9.2	U M	67	9.2	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1260	9.2	U M	67	9.2	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1262	9.2	U M	67	9.2	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
PCB-1268	9.2	U M	67	9.2	ug/Kg		07/29/21 17:00	07/30/21 07:14	1
Polychlorinated biphenyls, Total	9.2	U	67	9.2	ug/Kg		07/29/21 17:00	07/30/21 07:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*88*		*37 - 150*	*07/29/21 17:00*	*07/30/21 07:14*	*1*
Tetrachloro-m-xylene	*90*		*54 - 150*	*07/29/21 17:00*	*07/30/21 07:14*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 460-793395/2-A
Matrix: Solid
Analysis Batch: 793487

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 793395

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			333	345	M	ug/Kg		103	65 - 133		
PCB-1260			333	374	M	ug/Kg		112	71 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*91*		*37 - 150*
Tetrachloro-m-xylene	*91*		*54 - 150*

Lab Sample ID: LCSD 460-793395/3-A
Matrix: Solid
Analysis Batch: 793487

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 793395

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			333	327		ug/Kg		98	65 - 133	5	30
PCB-1260			333	351		ug/Kg		105	71 - 150	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*89*		*37 - 150*
Tetrachloro-m-xylene	*90*		*54 - 150*

Lab Sample ID: 460-239759-E-4-A MS
Matrix: Solid
Analysis Batch: 793487

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 793395

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	9.4	U M	350	321		ug/Kg	☼	92	65 - 133		
PCB-1260	9.7	U M	350	343		ug/Kg	☼	98	71 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*76*	*M*	*37 - 150*
Tetrachloro-m-xylene	*78*		*54 - 150*

Lab Sample ID: 460-239759-E-4-B MSD
Matrix: Solid
Analysis Batch: 793487

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 793395

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	9.4	U M	350	323		ug/Kg	☼	92	65 - 133	1	30
PCB-1260	9.7	U M	350	340		ug/Kg	☼	97	71 - 150	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*80*		*37 - 150*
Tetrachloro-m-xylene	*82*		*54 - 150*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 460-793704/1-A
Matrix: Solid
Analysis Batch: 794019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 793704

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	ND		33	3.5	ug/Kg		07/30/21 23:58	08/02/21 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*106*		*65 - 150*	*07/30/21 23:58*	*08/02/21 11:55*	*1*

Lab Sample ID: LCS 460-793704/2-A
Matrix: Solid
Analysis Batch: 794019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 793704

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Silvex (2,4,5-TP)			8.33	11.7	J	ug/Kg		140	58 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*115*		*65 - 150*

Lab Sample ID: LCSD 460-793704/3-A
Matrix: Solid
Analysis Batch: 794019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 793704

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silvex (2,4,5-TP)			8.33	11.6	J	ug/Kg		140	58 - 150	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*113*		*65 - 150*

Lab Sample ID: 160-42911-1 MS
Matrix: Solid
Analysis Batch: 794019

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 793704

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Silvex (2,4,5-TP)	ND	F1	9.72	17.4	J F1	ug/Kg	☼	179	58 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*122*		*65 - 150*

Lab Sample ID: 160-42911-1 MSD
Matrix: Solid
Analysis Batch: 794019

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 793704

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silvex (2,4,5-TP)	ND	F1	9.72	14.4	J	ug/Kg	☼	148	58 - 150	19	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*140*		*65 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-511475/1-A
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511475

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20	0.046	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.041	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.031	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.038	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.053	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.022	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.048	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.042	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.030	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20	0.021	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.037	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.038	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.029	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20	0.049	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.043	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.052	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.033	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		0.20	0.023	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		0.20	0.048	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
6:2 FTS	ND		0.20	0.027	ug/Kg		07/30/21 04:34	07/31/21 12:31	1
8:2 FTS	ND		0.20	0.035	ug/Kg		07/30/21 04:34	07/31/21 12:31	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*78*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C5 PFPeA	*83*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C2 PFHxA	*103*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C4 PFHpA	*89*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C4 PFOA	*88*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C5 PFNA	*93*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C2 PFDA	*99*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C2 PFUnA	*99*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C2 PFDoA	*97*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C2 PFTeDA	*96*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C3 PFBS	*95*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
18O2 PFHxS	*94*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C4 PFOS	*100*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
13C8 FOSA	*108*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
d3-NMeFOSAA	*91*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
d5-NEtFOSAA	*100*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
M2-6:2 FTS	*104*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*
M2-8:2 FTS	*116*		*25 - 150*	*07/30/21 04:34*	*07/31/21 12:31*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-511475/2-A
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511475

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	1.94		ug/Kg		97	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	2.15		ug/Kg		108	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	1.82		ug/Kg		91	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	1.77		ug/Kg		89	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	1.79		ug/Kg		90	72 - 132
Perfluorononanoic acid (PFNA)	2.00	1.86		ug/Kg		93	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	1.97		ug/Kg		99	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	2.29		ug/Kg		114	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.06		ug/Kg		103	71 - 131
Perfluorotridecanoic acid (PFTriA)	2.00	2.04		ug/Kg		102	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	1.98		ug/Kg		99	67 - 127
Perfluorobutanesulfonic acid (PFBS)	1.77	1.88		ug/Kg		106	69 - 129
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.79		ug/Kg		99	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	1.66		ug/Kg		87	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	1.68		ug/Kg		90	68 - 141
Perfluorodecanesulfonic acid (PFDS)	1.93	1.67		ug/Kg		86	71 - 131
Perfluorooctanesulfonamide (FOSA)	2.00	1.83		ug/Kg		92	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.13		ug/Kg		106	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.92		ug/Kg		96	72 - 132
6:2 FTS	1.90	1.80		ug/Kg		95	73 - 139
8:2 FTS	1.92	1.74		ug/Kg		91	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*75*		*25 - 150*
13C5 PFPeA	*76*		*25 - 150*
13C2 PFHxA	*95*		*25 - 150*
13C4 PFHpA	*91*		*25 - 150*
13C4 PFOA	*94*		*25 - 150*
13C5 PFNA	*91*		*25 - 150*
13C2 PFDA	*92*		*25 - 150*
13C2 PFUnA	*91*		*25 - 150*
13C2 PFDoA	*92*		*25 - 150*
13C2 PFTeDA	*90*		*25 - 150*
13C3 PFBS	*83*		*25 - 150*
18O2 PFHxS	*91*		*25 - 150*
13C4 PFOS	*103*		*25 - 150*
13C8 FOSA	*97*		*25 - 150*
d3-NMeFOSAA	*90*		*25 - 150*
d5-NEtFOSAA	*95*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-511475/2-A
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511475

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-6:2 FTS	*103*		*25 - 150*
M2-8:2 FTS	*100*		*25 - 150*

Lab Sample ID: 320-76807-A-2-B MS
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 511475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	0.31		2.08	2.51		ug/Kg	☼	106	76 - 136
Perfluoropentanoic acid (PFPeA)	1.0		2.08	3.69		ug/Kg	☼	128	69 - 129
Perfluorohexanoic acid (PFHxA)	2.7	F1	2.08	6.39	F1	ug/Kg	☼	179	71 - 131
Perfluoroheptanoic acid (PFHpA)	1.2	F1	2.08	4.10	F1	ug/Kg	☼	138	71 - 131
Perfluorooctanoic acid (PFOA)	3.1	F1	2.08	7.90	F1	ug/Kg	☼	232	72 - 132
Perfluorononanoic acid (PFNA)	0.38		2.08	2.87		ug/Kg	☼	120	73 - 133
Perfluorodecanoic acid (PFDA)	0.28		2.08	2.51		ug/Kg	☼	107	72 - 132
Perfluoroundecanoic acid (PFUnA)	0.071	J F1	2.08	3.01	F1	ug/Kg	☼	141	66 - 126
Perfluorododecanoic acid (PFDoA)	ND		2.08	2.11		ug/Kg	☼	101	71 - 131
Perfluorotridecanoic acid (PFTriA)	ND		2.08	2.44		ug/Kg	☼	117	71 - 131
Perfluorotetradecanoic acid (PFTeA)	ND		2.08	1.95		ug/Kg	☼	94	67 - 127
Perfluorobutanesulfonic acid (PFBS)	0.46		1.84	2.61		ug/Kg	☼	117	69 - 129
Perfluoroheptanesulfonic Acid (PFHpS)	1.2	F1 F2	1.98	4.23	F1	ug/Kg	☼	152	76 - 136
Perfluorodecanesulfonic acid (PFDS)	ND		2.01	1.94		ug/Kg	☼	97	71 - 131
Perfluorooctanesulfonamide (FOSA)	0.055	J	2.08	2.12		ug/Kg	☼	99	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.08	2.50		ug/Kg	☼	120	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.08	2.36		ug/Kg	☼	113	72 - 132
6:2 FTS	2.0	F1	1.97	6.34	F1	ug/Kg	☼	219	73 - 139
8:2 FTS	1.4	F1	2.00	4.78	F1	ug/Kg	☼	168	75 - 135

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	*76*		*25 - 150*
13C5 PFPeA	*79*		*25 - 150*
13C2 PFHxA	*97*		*25 - 150*
13C4 PFHpA	*78*		*25 - 150*
13C4 PFOA	*86*		*25 - 150*
13C5 PFNA	*78*		*25 - 150*
13C2 PFDA	*93*		*25 - 150*
13C2 PFUnA	*89*		*25 - 150*
13C2 PFDoA	*88*		*25 - 150*
13C2 PFTeDA	*87*		*25 - 150*
13C3 PFBS	*91*		*25 - 150*
13C4 PFOS	*86*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 320-76807-A-2-B MS
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 511475

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C8 FOSA	90		25 - 150
d3-NMeFOSAA	82		25 - 150
d5-NEtFOSAA	84		25 - 150
M2-6:2 FTS	91		25 - 150
M2-8:2 FTS	119		25 - 150

Lab Sample ID: 320-76807-A-2-C MSD
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	0.31		2.29	2.60		ug/Kg	☼	100	76 - 136	4	30
Perfluoropentanoic acid (PFPeA)	1.0		2.29	3.59		ug/Kg	☼	112	69 - 129	3	30
Perfluorohexanoic acid (PFHxA)	2.7	F1	2.29	5.80	F1	ug/Kg	☼	137	71 - 131	10	30
Perfluoroheptanoic acid (PFHpA)	1.2	F1	2.29	4.32	F1	ug/Kg	☼	135	71 - 131	5	30
Perfluorooctanoic acid (PFOA)	3.1	F1	2.29	10.5	F1	ug/Kg	☼	326	72 - 132	28	30
Perfluorononanoic acid (PFNA)	0.38		2.29	3.28		ug/Kg	☼	127	73 - 133	13	30
Perfluorodecanoic acid (PFDA)	0.28		2.29	2.73		ug/Kg	☼	107	72 - 132	9	30
Perfluoroundecanoic acid (PFUnA)	0.071	J F1	2.29	3.24	F1	ug/Kg	☼	139	66 - 126	7	30
Perfluorododecanoic acid (PFDoA)	ND		2.29	2.50		ug/Kg	☼	109	71 - 131	17	30
Perfluorotridecanoic acid (PFTriA)	ND		2.29	2.59		ug/Kg	☼	113	71 - 131	6	30
Perfluorotetradecanoic acid (PFTeA)	ND		2.29	2.17		ug/Kg	☼	95	67 - 127	11	30
Perfluorobutanesulfonic acid (PFBS)	0.46		2.02	2.77		ug/Kg	☼	114	69 - 129	6	30
Perfluoroheptanesulfonic Acid (PFHpS)	1.2	F1 F2	2.18	10.0	F1 F2	ug/Kg	☼	404	76 - 136	81	30
Perfluorodecanesulfonic acid (PFDS)	ND		2.20	2.06		ug/Kg	☼	94	71 - 131	6	30
Perfluorooctanesulfonamide (FOSA)	0.055	J	2.29	2.17		ug/Kg	☼	93	77 - 137	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.29	2.63		ug/Kg	☼	115	72 - 132	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.29	2.44		ug/Kg	☼	107	72 - 132	3	30
6:2 FTS	2.0	F1	2.17	5.47	F1	ug/Kg	☼	160	73 - 139	15	30
8:2 FTS	1.4	F1	2.19	4.35		ug/Kg	☼	133	75 - 135	10	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C4 PFBA	87		25 - 150
13C5 PFPeA	86		25 - 150
13C2 PFHxA	112		25 - 150
13C4 PFHpA	80		25 - 150
13C4 PFOA	92		25 - 150
13C5 PFNA	80		25 - 150
13C2 PFDA	106		25 - 150
13C2 PFUnA	103		25 - 150
13C2 PFDoA	90		25 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 320-76807-A-2-C MSD
Matrix: Solid
Analysis Batch: 511961

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511475

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2 PFTeDA	97		25 - 150
13C3 PFBS	95		25 - 150
13C4 PFOS	91		25 - 150
13C8 FOSA	111		25 - 150
d3-NMeFOSAA	93		25 - 150
d5-NEtFOSAA	98		25 - 150
M2-6:2 FTS	97		25 - 150
M2-8:2 FTS	139		25 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances - DL

Lab Sample ID: 320-76807-A-2-B MS
Matrix: Solid
Analysis Batch: 512253

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 511475

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanesulfonic acid (PFHxS) - DL	29	F2	1.90	47.3	4	ug/Kg	☼	988	62 - 122
Perfluorooctanesulfonic acid (PFOS) - DL	34	F2	1.93	68.2	4	ug/Kg	☼	1784	68 - 141

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
18O2 PFHxS - DL	88		25 - 150
13C4 PFOS - DL	92		25 - 150

Lab Sample ID: 320-76807-A-2-C MSD
Matrix: Solid
Analysis Batch: 512253

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511475

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS) - DL	29	F2	2.08	93.4	4 F2	ug/Kg	☼	3116	62 - 122	66	30
Perfluorooctanesulfonic acid (PFOS) - DL	34	F2	2.12	131	E 4 F2	ug/Kg	☼	4569	68 - 141	63	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
18O2 PFHxS - DL	92		25 - 150
13C4 PFOS - DL	97		25 - 150

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 460-794097/1-A
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 794097

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.10	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Barium	ND		2.0	0.15	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Beryllium	ND		0.40	0.057	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Cadmium	ND		1.0	0.11	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Chromium	ND		2.0	0.17	mg/Kg		08/03/21 02:59	08/03/21 10:15	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 460-794097/1-A
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 794097

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.22	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Lead	ND		0.60	0.20	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Manganese	ND		4.0	0.40	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Nickel	ND		2.0	0.19	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Selenium	ND		1.3	0.12	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Silver	ND		1.0	0.089	mg/Kg		08/03/21 02:59	08/03/21 10:15	1
Zinc	ND		8.0	2.3	mg/Kg		08/03/21 02:59	08/03/21 10:15	1

Lab Sample ID: LCSSRM 460-794097/2-A ^5
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 794097

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	140	160		mg/Kg		114.2	82.9 - 117.9
Barium	202	219		mg/Kg		108.3	81.2 - 118.3
Beryllium	42.6	45.9		mg/Kg		107.7	81.0 - 119.0
Cadmium	97.9	105		mg/Kg		107.2	80.0 - 119.5
Chromium	60.4	67.9		mg/Kg		112.4	80.3 - 119.7
Copper	122	135		mg/Kg		110.3	82.8 - 117.2
Lead	56.7	63.4		mg/Kg		111.8	82.9 - 116.9
Manganese	457	509		mg/Kg		111.4	79.6 - 120.6
Nickel	151	169		mg/Kg		111.7	79.5 - 121.2
Selenium	35.5	40.7		mg/Kg		114.6	77.5 - 122.3
Silver	33.6	22.1		mg/Kg		65.6	48.2 - 73.5
Zinc	186	204		mg/Kg		109.9	79.0 - 121.0

Lab Sample ID: 460-239941-A-9-E MS
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 794097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.4		11.6	12.3		mg/Kg	☼	94	75 - 125
Barium	11	F1	11.6	26.2	F1	mg/Kg	☼	131	75 - 125
Beryllium	0.069	J	5.81	6.08		mg/Kg	☼	104	75 - 125
Cadmium	ND		5.81	5.94		mg/Kg	☼	102	75 - 125
Chromium	11	F1	11.6	27.2	F1	mg/Kg	☼	138	75 - 125
Copper	3.0		11.6	15.6		mg/Kg	☼	109	75 - 125
Lead	8.4	F1	5.81	16.0	F1	mg/Kg	☼	129	75 - 125
Manganese	7.3		58.1	65.6		mg/Kg	☼	100	75 - 125
Nickel	3.9	F1	11.6	18.0		mg/Kg	☼	121	75 - 125
Selenium	ND		11.6	10.2		mg/Kg	☼	87	75 - 125

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 460-239941-A-9-E MS
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 794097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		5.81	5.76		mg/Kg	☼	99	75 - 125
Zinc	3.6	J	58.1	60.6		mg/Kg	☼	98	75 - 125

Lab Sample ID: 460-239941-B-9-B MSD
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 794097

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.4		11.6	12.9		mg/Kg	☼	99	75 - 125	5	20
Barium	11	F1	11.6	27.7	F1	mg/Kg	☼	144	75 - 125	6	20
Beryllium	0.069	J	5.81	5.99		mg/Kg	☼	102	75 - 125	2	20
Cadmium	ND		5.81	6.14		mg/Kg	☼	106	75 - 125	3	20
Chromium	11	F1	11.6	28.6	F1	mg/Kg	☼	149	75 - 125	5	20
Copper	3.0		11.6	16.2		mg/Kg	☼	114	75 - 125	4	20
Lead	8.4	F1	5.81	16.4	F1	mg/Kg	☼	137	75 - 125	3	20
Manganese	7.3		58.1	66.4		mg/Kg	☼	102	75 - 125	1	20
Nickel	3.9	F1	11.6	19.0	F1	mg/Kg	☼	130	75 - 125	6	20
Selenium	ND		11.6	10.5		mg/Kg	☼	91	75 - 125	4	20
Silver	ND		5.81	5.88		mg/Kg	☼	101	75 - 125	2	20
Zinc	3.6	J	58.1	61.6		mg/Kg	☼	100	75 - 125	2	20

Lab Sample ID: 460-239941-A-9-D DU
Matrix: Solid
Analysis Batch: 794193

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 794097

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.4		1.51		mg/Kg	☼	9	20
Barium	11	F1	12.7		mg/Kg	☼	15	20
Beryllium	0.069	J	0.0849	J F5	mg/Kg	☼	21	20
Cadmium	ND		ND		mg/Kg	☼	NC	20
Chromium	11	F1	15.3	F3	mg/Kg	☼	30	20
Copper	3.0		3.56		mg/Kg	☼	17	20
Lead	8.4	F1	10.2		mg/Kg	☼	19	20
Manganese	7.3		8.43		mg/Kg	☼	15	20
Nickel	3.9	F1	4.66		mg/Kg	☼	17	20
Selenium	ND		ND		mg/Kg	☼	NC	20
Silver	ND		ND		mg/Kg	☼	NC	20
Zinc	3.6	J	4.55	J F5	mg/Kg	☼	24	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-795392/10-A
Matrix: Solid
Analysis Batch: 795469

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 795392

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0040	mg/Kg		08/10/21 03:07	08/10/21 06:25	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 460-795392/11-A ^40
Matrix: Solid
Analysis Batch: 795469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 795392

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	16.5	16.2		mg/Kg		98.3	74.5 - 124.8

Lab Sample ID: 160-42911-1 MS
Matrix: Solid
Analysis Batch: 795469

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 795392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.048		0.0870	0.136		mg/Kg	☼	100	80 - 120

Lab Sample ID: 160-42911-1 DU
Matrix: Solid
Analysis Batch: 795469

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 795392

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.048		0.0511		mg/Kg	☼	5	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 460-794635/1-A
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 794635

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		2.0	0.85	mg/Kg		08/05/21 08:33	08/05/21 16:50	1

Lab Sample ID: LCSI 460-794635/3-A
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	708	703		mg/Kg		99	80 - 120

Lab Sample ID: LCSSRM 460-794635/2-A
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	12.3	11.9		mg/Kg		96.5	84.0 - 114.6

Lab Sample ID: LCSSRM 460-794635/4-A
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	154	76.5		mg/Kg		49.7	21.2 - 120.1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 160-42911-1 MSI
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	ND		819	715		mg/Kg	☼	87	75 - 125

Lab Sample ID: 160-42911-1 MSS
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	ND		46.1	36.5		mg/Kg	☼	79	75 - 125

Lab Sample ID: 160-42911-1 DU
Matrix: Solid
Analysis Batch: 794683

Client Sample ID: BF-08-072721
Prep Type: Total/NA
Prep Batch: 794635

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/Kg	☼	NC	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 460-794455/1-A
Matrix: Solid
Analysis Batch: 794546

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 794455

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0055	mg/Kg		08/04/21 13:51	08/04/21 20:27	1

Lab Sample ID: LCSSRM 460-794455/2-A ^20
Matrix: Solid
Analysis Batch: 794546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 794455

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total			95.3	82.6		mg/Kg		86.6	23.7 - 123.8

Lab Sample ID: 460-239827-A-18-N MS
Matrix: Solid
Analysis Batch: 794546

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 794455

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		12.7	12.8		mg/Kg	☼	100	11 - 108

Lab Sample ID: 460-239827-A-18-O MSD
Matrix: Solid
Analysis Batch: 794546

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 794455

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		13.7	13.8		mg/Kg	☼	100	11 - 108	8	40

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

GC/MS VOA

Prep Batch: 545086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	5035	
MB 280-545086/5-A	Method Blank	Total/NA	Solid	5035	
LCS 280-545086/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-545086/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 545344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8260C	545086
MB 280-545086/5-A	Method Blank	Total/NA	Solid	8260C	545086
LCS 280-545086/1-A	Lab Control Sample	Total/NA	Solid	8260C	545086
LCSD 280-545086/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	545086

GC/MS Semi VOA

Prep Batch: 545008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	3550C	
MB 280-545008/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-545008/2-A	Lab Control Sample	Total/NA	Solid	3550C	
160-42911-1 MS	BF-08-072721	Total/NA	Solid	3550C	
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	3550C	

Analysis Batch: 545822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8270D	545008
MB 280-545008/1-A	Method Blank	Total/NA	Solid	8270D	545008
LCS 280-545008/2-A	Lab Control Sample	Total/NA	Solid	8270D	545008
160-42911-1 MS	BF-08-072721	Total/NA	Solid	8270D	545008
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	8270D	545008

GC Semi VOA

Prep Batch: 793395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	3546	
MB 460-793395/1-A	Method Blank	Total/NA	Solid	3546	
LCS 460-793395/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 460-793395/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
460-239759-E-4-A MS	Matrix Spike	Total/NA	Solid	3546	
460-239759-E-4-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Prep Batch: 793396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	3546	
MB 460-793396/1-A	Method Blank	Total/NA	Solid	3546	
LCS 460-793396/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 460-793396/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
160-42911-1 MS	BF-08-072721	Total/NA	Solid	3546	
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	3546	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

GC Semi VOA

Analysis Batch: 793459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8081B	793396
MB 460-793396/1-A	Method Blank	Total/NA	Solid	8081B	793396
LCS 460-793396/2-A	Lab Control Sample	Total/NA	Solid	8081B	793396
LCSD 460-793396/3-A	Lab Control Sample Dup	Total/NA	Solid	8081B	793396
160-42911-1 MS	BF-08-072721	Total/NA	Solid	8081B	793396
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	8081B	793396

Analysis Batch: 793487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8082A	793395
MB 460-793395/1-A	Method Blank	Total/NA	Solid	8082A	793395
LCS 460-793395/2-A	Lab Control Sample	Total/NA	Solid	8082A	793395
LCSD 460-793395/3-A	Lab Control Sample Dup	Total/NA	Solid	8082A	793395
460-239759-E-4-A MS	Matrix Spike	Total/NA	Solid	8082A	793395
460-239759-E-4-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8082A	793395

Prep Batch: 793704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8151A	
MB 460-793704/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 460-793704/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 460-793704/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	
160-42911-1 MS	BF-08-072721	Total/NA	Solid	8151A	
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	8151A	

Analysis Batch: 794019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	8151A	793704
MB 460-793704/1-A	Method Blank	Total/NA	Solid	8151A	793704
LCS 460-793704/2-A	Lab Control Sample	Total/NA	Solid	8151A	793704
LCSD 460-793704/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	793704
160-42911-1 MS	BF-08-072721	Total/NA	Solid	8151A	793704
160-42911-1 MSD	BF-08-072721	Total/NA	Solid	8151A	793704

LCMS

Prep Batch: 511475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	SHAKE	
MB 320-511475/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-511475/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-76807-A-2-B MS	Matrix Spike	Total/NA	Solid	SHAKE	
320-76807-A-2-B MS - DL	Matrix Spike	Total/NA	Solid	SHAKE	
320-76807-A-2-C MSD - DL	Matrix Spike Duplicate	Total/NA	Solid	SHAKE	
320-76807-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	SHAKE	

Analysis Batch: 511961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	537 (modified)	511475
MB 320-511475/1-A	Method Blank	Total/NA	Solid	537 (modified)	511475
LCS 320-511475/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	511475

LCMS (Continued)

Analysis Batch: 511961 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76807-A-2-B MS	Matrix Spike	Total/NA	Solid	537 (modified)	511475
320-76807-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	537 (modified)	511475

Analysis Batch: 512253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76807-A-2-B MS - DL	Matrix Spike	Total/NA	Solid	537 (modified)	511475
320-76807-A-2-C MSD - DL	Matrix Spike Duplicate	Total/NA	Solid	537 (modified)	511475

Metals

Prep Batch: 794097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	3050B	
MB 460-794097/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 460-794097/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
460-239941-A-9-E MS	Matrix Spike	Total/NA	Solid	3050B	
460-239941-B-9-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	
460-239941-A-9-D DU	Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 794193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	6020B	794097
MB 460-794097/1-A	Method Blank	Total/NA	Solid	6020B	794097
LCSSRM 460-794097/2-A ^5	Lab Control Sample	Total/NA	Solid	6020B	794097
460-239941-A-9-E MS	Matrix Spike	Total/NA	Solid	6020B	794097
460-239941-B-9-B MSD	Matrix Spike Duplicate	Total/NA	Solid	6020B	794097
460-239941-A-9-D DU	Duplicate	Total/NA	Solid	6020B	794097

Prep Batch: 795392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	7471B	
MB 460-795392/10-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 460-795392/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	
160-42911-1 MS	BF-08-072721	Total/NA	Solid	7471B	
160-42911-1 DU	BF-08-072721	Total/NA	Solid	7471B	

Analysis Batch: 795469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	7471B	795392
MB 460-795392/10-A	Method Blank	Total/NA	Solid	7471B	795392
LCSSRM 460-795392/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	795392
160-42911-1 MS	BF-08-072721	Total/NA	Solid	7471B	795392
160-42911-1 DU	BF-08-072721	Total/NA	Solid	7471B	795392

General Chemistry

Analysis Batch: 511668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	Moisture	
320-76885-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

General Chemistry

Analysis Batch: 544925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	Moisture	
280-151299-F-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 793341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	Moisture	
460-239782-A-3 MS	Matrix Spike	Total/NA	Solid	Moisture	
460-239782-A-3 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
460-239392-B-8 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 794346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	7196A	

Prep Batch: 794455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	9012B	
MB 460-794455/1-A	Method Blank	Total/NA	Solid	9012B	
LCSSRM 460-794455/2-A ^2	Lab Control Sample	Total/NA	Solid	9012B	
460-239827-A-18-N MS	Matrix Spike	Total/NA	Solid	9012B	
460-239827-A-18-O MSD	Matrix Spike Duplicate	Total/NA	Solid	9012B	

Analysis Batch: 794546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	9012B	794455
MB 460-794455/1-A	Method Blank	Total/NA	Solid	9012B	794455
LCSSRM 460-794455/2-A ^2	Lab Control Sample	Total/NA	Solid	9012B	794455
460-239827-A-18-N MS	Matrix Spike	Total/NA	Solid	9012B	794455
460-239827-A-18-O MSD	Matrix Spike Duplicate	Total/NA	Solid	9012B	794455

Prep Batch: 794635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	3060A	
MB 460-794635/1-A	Method Blank	Total/NA	Solid	3060A	
LCSI 460-794635/3-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSSRM 460-794635/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSSRM 460-794635/4-A	Lab Control Sample	Total/NA	Solid	3060A	
160-42911-1 MSI	BF-08-072721	Total/NA	Solid	3060A	
160-42911-1 MSS	BF-08-072721	Total/NA	Solid	3060A	
160-42911-1 DU	BF-08-072721	Total/NA	Solid	3060A	

Analysis Batch: 794683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-42911-1	BF-08-072721	Total/NA	Solid	7196A	794635
MB 460-794635/1-A	Method Blank	Total/NA	Solid	7196A	794635
LCSI 460-794635/3-A	Lab Control Sample	Total/NA	Solid	7196A	794635
LCSSRM 460-794635/2-A	Lab Control Sample	Total/NA	Solid	7196A	794635
LCSSRM 460-794635/4-A	Lab Control Sample	Total/NA	Solid	7196A	794635
160-42911-1 MSI	BF-08-072721	Total/NA	Solid	7196A	794635
160-42911-1 MSS	BF-08-072721	Total/NA	Solid	7196A	794635
160-42911-1 DU	BF-08-072721	Total/NA	Solid	7196A	794635

Surrogate Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DCA	TOL	DBFM
Lab Sample ID	Client Sample ID	(58-140)	(80-126)	(75-121)
160-42911-1	BF-08-072721	92	100	99
LCS 280-545086/1-A	Lab Control Sample	98	98	100
LCSD 280-545086/3-A	Lab Control Sample Dup	90	98	99
MB 280-545086/5-A	Method Blank	92	98	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		NBZ	PHL	TPHL	TBP	2FP	FBP
Lab Sample ID	Client Sample ID	(46-120)	(46-120)	(46-120)	(35-120)	(43-120)	(46-120)
160-42911-1	BF-08-072721	48	57	96	83	51	67
160-42911-1 MS	BF-08-072721	69	75	83	82	71	82
160-42911-1 MSD	BF-08-072721	59	63	95	91	60	73
LCS 280-545008/2-A	Lab Control Sample	72	74	100	92	75	82
MB 280-545008/1-A	Method Blank	57	59	92	64	58	64

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
2FP = 2-Fluorophenol (Surr)
FBP = 2-Fluorobiphenyl

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP2	TCX2
Lab Sample ID	Client Sample ID	(10-150)	(10-133)
160-42911-1	BF-08-072721	92	84
160-42911-1 MS	BF-08-072721	72	64
160-42911-1 MSD	BF-08-072721	71	64

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1	TCX2
Lab Sample ID	Client Sample ID	(10-150)	(10-133)
LCS 460-793396/2-A	Lab Control Sample	82	79
LCSD 460-793396/3-A	Lab Control Sample Dup	83	80

Surrogate Summary

Client: FPM Remediations Inc
Job ID: 160-42911-1
Project/Site: BNL Decommissioning Project

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP1 (10-150)	TCX2 (10-133)
MB 460-793396/1-A	Method Blank	111	103

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP1 (37-150)	TCX1 (54-150)
160-42911-1	BF-08-072721	79	82
460-239759-E-4-A MS	Matrix Spike	76 M	78
460-239759-E-4-B MSD	Matrix Spike Duplicate	80	82
LCS 460-793395/2-A	Lab Control Sample	91	91
LCSD 460-793395/3-A	Lab Control Sample Dup	89	90
MB 460-793395/1-A	Method Blank	88	90

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPAA1 (65-150)
160-42911-1	BF-08-072721	119
160-42911-1 MS	BF-08-072721	122
160-42911-1 MSD	BF-08-072721	140

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

Method: 8151A - Herbicides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPAA2 (65-150)
LCS 460-793704/2-A	Lab Control Sample	115
LCSD 460-793704/3-A	Lab Control Sample Dup	113
MB 460-793704/1-A	Method Blank	106

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

Isotope Dilution Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-42911-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
160-42911-1	BF-08-072721	79	80	97	89	95	90	98	91
320-76807-A-2-B MS	Matrix Spike	76	79	97	78	86	78	93	89
320-76807-A-2-B MS - DL	Matrix Spike								
320-76807-A-2-C MSD	Matrix Spike Duplicate	87	86	112	80	92	80	106	103
320-76807-A-2-C MSD - DL	Matrix Spike Duplicate								
LCS 320-511475/2-A	Lab Control Sample	75	76	95	91	94	91	92	91
MB 320-511475/1-A	Method Blank	78	83	103	89	88	93	99	99

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
160-42911-1	BF-08-072721	85	87	84	82	85	92	88	96
320-76807-A-2-B MS	Matrix Spike	88	87	91		86	90	82	84
320-76807-A-2-B MS - DL	Matrix Spike				88	92			
320-76807-A-2-C MSD	Matrix Spike Duplicate	90	97	95		91	111	93	98
320-76807-A-2-C MSD - DL	Matrix Spike Duplicate				92	97			
LCS 320-511475/2-A	Lab Control Sample	92	90	83	91	103	97	90	95
MB 320-511475/1-A	Method Blank	97	96	95	94	100	108	91	100

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)
160-42911-1	BF-08-072721	116	124
320-76807-A-2-B MS	Matrix Spike	91	119
320-76807-A-2-B MS - DL	Matrix Spike		
320-76807-A-2-C MSD	Matrix Spike Duplicate	97	139
320-76807-A-2-C MSD - DL	Matrix Spike Duplicate		
LCS 320-511475/2-A	Lab Control Sample	103	100
MB 320-511475/1-A	Method Blank	104	116

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

A-6
Waste Characterization

BNL HFBR Stack
Demolition Decommissioning

Table A-6-1

Abatement Waste Characterization Data Summary

	Sample ID	Tote[1]		BT[2]		BTGA/GB[2]		FW/GA/GB-11[1]		FWGS-11[1]		TANK-1102-1[2]		TANK-1102-2[2]		TANK-1102-3[2]		WC-001-030421[2]	
	Lab Sample ID	0102623-01		0102623-03		160-40134-1		160-40134-2		160-40134-4		160-40891-1		160-40891-4		160-40891-6		160-41401-1	
	Matrix	Water		Water		Water		Water						Water				Water	
	Collection Date	10/26/2020				10/27/2020		10/27/2020		10/27/2020		12/21/2020						3/4/2021	
Analyte	Unit	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Gross Alpha and Gross Beta Radioactivity																			
Gross Alpha	pCi/L					5.68	UG	0.18	UG			8.61	UG						
Gross Beta	pCi/L					**49.4**	G	**48.6**				**83.6**	G						
Cesium 137 & Other Gamma Emitters																			
Actinium-228	pCi/L																	7.04	U
Bismuth-214	pCi/L																	-18	U
Bismuth-212	pCi/L																	**19.9**	
Cesium-137	pCi/L									-5.91	U			8.53	UG			-3.23	U
Cobalt-60	pCi/L									**6.96**				8.33	UG			3.31	U
Lead-212	pCi/L																	-4.62	U
Lead-214	pCi/L																	-10.8	U
Potassium-40	pCi/L																	57.36	U
Sodium-22	pCi/L									**8.59**				**10.5**				2.01	U
Radium-226	pCi/L																	**19.9**	
Europium-152	pCi/L									9.55	U			22.6	U			15.2	U
Europium-154	pCi/L									-0.759	U			5.82	U			3.24	U
Europium-155	pCi/L									10.5	U			6.04	U			-8.9	U
Zinc-65	pCi/L									0.000	U			5.10	U			O	U
Method 906.0 - Tritium																			
Tritium	pCi/L															**2270**		**2370**	
Method C-01-1 0 Carbon-14																			
Carbon-14	pCi/L															2.22	U	4.26	U
Method 905 - Strontium-90																			
Strontium-90	pCi/L																	**4.91**	
Method A-01-R																			
Plutonium-238	pCi/g					0.0143	U											0.124	U
Plutonium 299/240	pCi/g					**0.0736**												-0.0415	U
Uranium-235	pCi/g					-0.0111	U											-0.151	U
Uranium-238	pCi/g					**0.140**												**0.872**	
Method 6010C - Lead																			
Lead	mg/L																	**200**	
Method 7470A - Mercury																			
Mercury	mg/L																	0.00008	U
Method 200.7/245.1 Metals																			
Arsenic	mg/L	<0.05	U	<0.05	U														
Barium	mg/L	<0.05	U	<0.05	U														
Cadmium	mg/L	<0.05	U	<0.05	U														
Chromium	mg/L	<0.05	U	<0.05	U														
Copper	mg/L	<0.05	U	<0.05	U														
Lead	mg/L	**0.07**		**0.11**															
Manganese	mg/L	**0.12**		**0.17**															
Nickel	mg/L	<0.05	U	<0.05	U														
Selenium	mg/L	<0.05	U	<0.05	U														
Silver	mg/L	<0.05	4C	<0.05	4C														
Zinc	mg/L	**0.05**		**0.14**															
Mercury	mg/L	<0.002	U	<0.002	U														
Method 608.3 - PCBs																			
1016	ug/L	<0.5	U	<0.5	U														
1221	ug/L	<0.5	U	<0.5	U														
1232	ug/L	<0.5	U	<0.5	U														
1242	ug/L	<0.5	U	<0.5	U														
1248	ug/L	<0.5	U	<0.5	U														
1254	ug/L	<0.5	U	<0.5	U														
1260	ug/L	<0.5	U	<0.5	U														
1262	ug/L	<0.5	U	<0.5	U														
1268	ug/L	<0.5	U	<0.5	U														

BNL HFBR Stack
Demolition Decommissioning

Table A-6-1

Abatement Waste Characterization Data Summary

	Sample ID	Tote[1]		BT[2]		BTGA/GB[2]		FW/GA/GB-11[1]		FWGS-11[1]		TANK-1102-1[2]		TANK-1102-2[2]		TANK-1102-3[2]		WC-001-030421[2]	
	Lab Sample ID	0102623-01		0102623-03		160-40134-1		160-40134-2		160-40134-4		160-40891-1		160-40891-4		160-40891-6		160-41401-1	
	Matrix	Water		Water		Water		Water				Water						Water	
	Collection Date	10/26/2020				10/27/2020		10/27/2020		10/27/2020		12/21/2020						3/4/2021	
Analyte	Unit	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Method 625.1 - BNAs																			
2,4,5-Trichlorophenol	ug/L	<10.0	U	**31.9**															
2,4,6-Trichlorophenol	ug/L	<10.0	U	<10.0	U														
2,4-Dichlorophenol	ug/L	<10.0	U	<10.0	U														
2,4-Dimethylphenol	ug/L	<10.0	U	<10.0	U														
2,4-Dinitrophenol	ug/L	<20.0	U	<10.0	U														
2-Chlorophenol	ug/L	<10.0	U	<10.0	U														
2-Methylphenol	ug/L	<10.0	U	<10.0	U														
2-Nitrophenol	ug/L	<10.0	U	<10.0	U														
3/4-Methylphenol	ug/L	<10.0	U	**13.2**															
4,6-Dinitro-2-methylphenol	ug/L	<20.0	U	<20.0	U														
4-Chloro-3-methylphenol	ug/L	<10.0	U	<10.0	U														
4-Nitrophenol	ug/L	<10.0	U	**27.6**															
Pentachlorophenol	ug/L	<10.0	4.K	<10.0	U														
Phenol	ug/L	<10.0	4.M	<10.0	U														
Method 8081B - Pesticides																			
4,4'-DDD	ug/L	<2.0	U	<2.0	U														
4,4'-DDE	ug/L	<2.0	U	<2.0	U														
4,4'-DDT	ug/L	<2.0	U	<2.0	U														
Aldrin	ug/L	<2.0	U	<2.0	U														
alpha-BHC	ug/L	<2.0	U	<2.0	U														
beta-BHC	ug/L	<2.0	U	<2.0	U														
Chlordane	ug/L	<2.0	U	<2.0	U														
cis-Chlordane	ug/L	<2.0	U	<2.0	U														
delta-BHC	ug/L	<2.0	U	<2.0	U														
Dieldrin	ug/L	<2.0	U	<2.0	U														
Endosulfan I	ug/L	<2.0	U	<2.0	U														
Endosulfan II	ug/L	<2.0	U	<2.0	U														
Endosulfan Sulfate	ug/L	<2.0	U	<2.0	U														
Endrin	ug/L	<2.0	U	<2.0	U														
Endrin Aldehyde	ug/L	<2.0	U	<2.0	U														
Endrin Ketone	ug/L	<2.0	U	<2.0	U														
gamma-BHC	ug/L	<2.0	U	<2.0	U														
Heptachlor	ug/L	<2.0	U	<2.0	U														
Heptachlor Epoxide	ug/L	<2.0	U	<2.0	U														
Methoxychlor	ug/L	<2.0	U	<2.0	U														
Toxaphene	ug/L	<2.0	U	<2.0	U														
trans-Chlordane	ug/L	<2.0	U	<2.0	U														
Method 8260D - VOCs																			
1,1,2-Trichloroethane	ug/L	<5.0	U	<10	3.B														
1,1-Dichloroethane	ug/L	<5.0	U	<10	3.B														
1,1-Dichloroethene	ug/L	<5.0	U	<10	3.B														
1,1-Dichloropropene	ug/L	<5.0	U	<10	3.B														
1,2,3-Trichlorobenzene	ug/L	<5.0	U	<10	3.B														
1,2,3-Trichloropropane	ug/L	<5.0	U	<10	3.B														
1,2,4,5-Tetramethylbenzene	ug/L	<5.0	2.B	<10	2.B, 3.B														
1,2,4-Trichlorobenzene	ug/L	<5.0	U	<10	3.B														
1,2,4-Trimethylbenzene	ug/L	<5.0	U	<10	3.B														
1,2-Dibromo-3-chloropropane	ug/L	<5.0	U	<10	3.B														
1,2-Dibromoethane	ug/L	<5.0	U	<10	3.B														
1,2-Dichlorobenzene	ug/L	<5.0	U	<10	3.B														
1,2-Dichloroethane	ug/L	<5.0	U	<10	3.B														
1,2-Dichloropropane	ug/L	<5.0	U	<10	3.B														
1,3,5-Trimethylbenzene	ug/L	<5.0	U	<10	3.B														
1,3-Dichlorobenzene	ug/L	<5.0	U	<10	3.B														
1,3-Dichloropropane	ug/L	<5.0	U	<10	3.B														
1,4-Dichlorobenzene	ug/L	<5.0	U	<10	3.B														
1,4-Diethylbenzene	ug/L	<5.0	2.B	<10	2.B, 3.B														
1,4-Dioxane	ug/L	<100	U	<200	3.B														
2,2-Dichloropropane	ug/L	<5.0	U	<10	3.B														
2-Chloroethyl Vinyl Ether	ug/L	<5.0	U	<10	3.B														
2-Chlorotoluene	ug/L	<5.0	U	<10	3.B														
4-Chlorotoluene	ug/L	<5.0	U	<10	3.B														
4-Ethyltoluene	ug/L	<5.0	2.B	<10.0	2.B, 3.B														
4-Isopropyltoluene	ug/L	**7.43**		<10.0	3.B														
4-Methyl-2-Pentanone	ug/L	<5.0	U	**47.5**	3.E														

Table A-6-1

Abatement Waste Characterization Data Summary

	Sample ID	Tote[1]		BT[2]		BTGA/GB[2]		FW/GA/GB-11[1]		FWGS-11[1]		TANK-1102-1[2]		TANK-1102-2[2]		TANK-1102-3[2]		WC-001-030421[2]	
	Lab Sample ID	0102623-01		0102623-03		160-40134-1		160-40134-2		160-40134-4		160-40891-1		160-40891-4		160-40891-6		160-41401-1	
	Matrix	Water		Water		Water		Water						Water				Water	
	Collection Date	10/26/2020				10/27/2020		10/27/2020		10/27/2020		12/21/2020						3/4/2021	
Analyte	Unit	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Acetone	ug/L	**260**	4.A, 4.G	**37.4**	3.E														
Acrolein	ug/L	<5.0	U	<10.0	4.J, 4.N, 3.B														
Acrylonitrile	ug/L	<5.0	U	<10.0	3.B														
Benzene	ug/L	<5.0	U	<10.0	3.B														
Bromobenzene	ug/L	<5.0	U	<10.0	3.B														
Bromochloromethane	ug/L	**155**	4.G	<10.0	3.B														
Bromodichloromethane	ug/L	<5.0	U	<10.0	3.B														
Bromoform	ug/L	<5.0	U	<10.0	3.B														
Bromomethane	ug/L	<5.0	U	<10.0	3.B														
Carbon disulfide	ug/L	<5.0	U	<10.0	3.B														
Carbon Tetrachloride	ug/L	**11.4**		<10.0	3.B														
Chlorobenzene	ug/L	<5.0	U	<10.0	3.B														
Chlorodifluoromethane	ug/L	<5.0	2.B	<10.0	2.B, 3.B														
Chloroethane	ug/L	**108**		<10.0	3.B														
Chloroform	ug/L	**1950**	4.A,4.G	<10.0	3.B														
Chloromethane	ug/L	**50.3**		<10.0	3.B														
cis-1,2-Dichloroethene	ug/L	<5.0	U	<10.0	3.B														
cis-1,3-Dichloropropene	ug/L	<5.0	U	<10.0	3.B														
Dibromochloromethane	ug/L	**15.8**		<10.0	3.B														
Dibromomethane	ug/L	<5.0	4.G	<10.0	3.B														
Dichlorodifluoromethane	ug/L	<5.0	U	<10.0	3.B														
Ethylbenzene	ug/L	<5.0	U	<10.0	3.B														
Hexachlorobutadiene	ug/L	<5.0	U	<10.0	3.B														
Isopropylbenzene	ug/L	<5.0	U	<10.0	3.B														
m,p-Xylenes	ug/L	<10.0	U	<20.0	3.B														
Methyl Acetate	ug/L	<5.0	U	<10.0	3.B														
Methyl Butyl Ketone	ug/L	<10.0	U	<10.0	3.B														
Methyl Ethyl Ketone	ug/L	**20.2**		<20.0	3.B														
Methylene Chloride	ug/L	<5.0	U	<20.0	3.B														
Methyl-tert-Butyl Ether	ug/L	<5.0	U	<10.0	3.B														
Naphthalene	ug/L	<5.0	U	<10.0	3.B														
n-Butylbenzene	ug/L	<5.0	U	<10.0	3.B														
n-Propylbenzene	ug/L	<5.0	U	<10.0	3.B														
o-Xylene	ug/L	<5.0	U	<10.0	3.B														
sec-Butylbenzene	ug/L	<5.0	U	<10.0	3.B														
Styrene	ug/L	<5.0	U	<10.0	3.B														
tert-Butyl alcohol	ug/L	<5.0	U	<10.0	3.B														
tert-Butylbenzene	ug/L	<5.0	U	<10.0	3.B														
Tetrachloroethene	ug/L	<5.0	U	<10.0	3.B														
Toluene	ug/L	<5.0	U	<10.0	3.B														
trans-1,2-Dichloroethene	ug/L	<5.0	U	<10.0	3.B														
trans-1,3-Dichloropropene	ug/L	<5.0	U	<10.0	3.B														
Trichloroethene	ug/L	<5.0	U	<10.0	3.B														
Trichlorofluoromethane	ug/L	<5.0	U	<10.0	3.B														
Vinyl Acetate	ug/L	<5.0	U	<10.0	3.B														
Vinyl chloride	ug/L	<5.0	U	<10.0	3.B														
Method 8270E - SVOCs																			
Acenaphthene	ug/L	<2.5	U	<2.5	U														
Acenaphthylene	ug/L	<2.5	U	<2.5	U														
Aniline	ug/L	<2.5	U	<2.5	U														
Anthracene	ug/L	<2.5	U	<2.5	U														
Benzo(a)anthracene	ug/L	<2.5	U	<2.5	U														
Benzo(a)pyrene	ug/L	**3.68**	4.C	**3.62**	4.C														
Benzo(b)fluoranthene	ug/L	**2.83**	4.C	**2.83**	4.C														
Benzo(g,h,i)perylene	ug/L	<2.5	U	<2.5	U														
Benzo(k)fluoranthene	ug/L	<2.5	U	<2.5	U														
Benzoic Acid	ug/L	**83.6**	4.C, 4.K, 4M	<5.0	4.M, 4.C, 4.K														
Benzyl alcohol	ug/L	<2.5	U	**23.7**	U														
bis(2-Chloroethoxy)methane	ug/L	<2.5	U	<2.5	U														
Bis(2-Chloroethyl)ether	ug/L	<2.5	U	<2.5	U														
Bis(2-Ethylhexyl)phthalate	ug/L	**5.51**	4.C	**16.4**	4.C														
Butyl benzyl phthalate	ug/L	**3.7**	4.C	**3.6**	4.C														
Carbazole	ug/L	<2.5	U	<2.5	U														
Chrysene	ug/L	<2.5	U	<2.5	U														
Dibenzo(a,h)anthracene	ug/L	<2.5	U	<2.5	U														
Dibenzofuran	ug/L	<2.5	U	<2.5	U														

BNL HFBR Stack
Demolition Decommissioning

Table A-6-1

Abatement Waste Characterization Data Summary

	Sample ID	Tote[1]		BT[2]		BTGA/GB[2]		FW/GA/GB-11[1]		FWGS-11[1]		TANK-1102-1[2]		TANK-1102-2[2]		TANK-1102-3[2]		WC-001-030421[2]	
	Lab Sample ID	0102623-01		0102623-03		160-40134-1		160-40134-2		160-40134-4		160-40891-1		160-40891-4		160-40891-6		160-41401-1	
	Matrix	Water		Water		Water		Water				Water						Water	
	Collection Date	10/26/2020				10/27/2020		10/27/2020		10/27/2020		12/21/2020						3/4/2021	
Analyte	Unit	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Diethyl phthalate	ug/L	<2.5	U	<2.5	U														
Dimethyl phthalate	ug/L	<2.5	U	<2.5	U														
Di-n-butyl phthalate	ug/L	**3.2**	4.C	**3.65**	4.C														
Di-n-octyl phthalate	ug/L	**6.03**	4.C	**4.13**	4.C														
Fluoranthene	ug/L	<2.5	U	<2.5	U														
Fluorene	ug/L	<2.5	U	<2.5	U														
Hexachlorobenzene	ug/L	<2.5	U	<2.5	U														
Hexachlorobutadiene	ug/L	<2.5	U	<2.5	U														
Hexachlorocyclopentadiene	ug/L	<2.5	U	<2.5	U														
Hexachloroethane	ug/L	<2.5	U	<2.5	U														
Indeno(1,2,3-cd)pyrene	ug/L	<2.5	4.C, 4.J	<2.5	4.C, 4.J														
Isophorone	ug/L	<2.5	U	<2.5	U														
Naphthalene	ug/L	<2.5	U	<2.5	U														
Nitrobenzene	ug/L	<2.5	U	<2.5	U														
N-Nitrosodimethylamine	ug/L	<2.5	U	<2.5	U														
N-Nitroso-di-n-propylamine	ug/L	<2.5	U	<2.5	U														
N-Nitrosodiphenylamine	ug/L	<2.5	U	<2.5	U														
Pentachlorophenol	ug/L	<2.5	4.K	**4.13**	4.K														
Phenanthrene	ug/L	<2.5	U	<2.5	U														
Pyrene	ug/L	<2.5	U	<2.5	U														
Pyridine	ug/L	<5	U	<5.0	U														

Notes:

[1] Filtered

[2] Unfiltered

Blank cell indicates no analysis performed for that parameter

Qual - Data Qualifier

U - Undetected at the limit of detection

D - The reported value is from a dilution

H - Sample was prepped or analyzed beyond the specified holding time

NA - Not Analyzed

J- Estimated: the analyte was positevely identified; the quantitation is an estimation

J1-Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

1.C Holding time exceeded, analyze immediate parameter.

2.B Parameter not certifiable by NELAP.

3.B Reporting limit raised due to target compound interference.

3.E Compound reported at a dilution factor.

3.H Sample has turbidity, but no color change.

4.A Estimated concentration, exceeds calibration range.

4.C Target compound found in blank.

4.D Surrogate recovery has failed low.

4.G Spike recovery out of range due to matrix interference.

4.I Dilution Water does not meet QC criteria.

4.J Continuing Calibration Verification (CCV) quality control levels failed low, values are considered to be estimated.

4.K Continuing Calibration Verification (CCV) quality control levels failed high, values are considered to be estimated.

4.M LCS recovery was above QC acceptance limit.

4.N LCS recovery was below QC acceptance limit.

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Laboratory Report

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

LIAL# 0102623

November 04, 2020

ICC Commonwealth
Ted Lansberry
55 South Long Street
Williamsville, NY 14221

Re: Brookhaven Labs Upton NY

Dear Ted Lansberry,

Enclosed please find the laboratory Analysis Report(s) for sample(s) received on October 26, 2020. Long Island Analytical laboratories analyzed the samples on October 28, 2020 for the following:

SAMPLE ID	ANALYSIS
Tote (Filtered)	Arsenic, Barium, Biochemical Oxygen Demand, Cadmium, Chlorine Demand, Chromium, Copper, Cyanide, EPA 1010 A, EPA 608.3, EPA 625 Phenols, EPA 8081 B, EPA 8260 D, EPA 8270 E, Fluoride, Hexavalent Chromium, Lead, Manganese, Mercury, Nickel, Non-Polar Material, pH, Residual Chlorine, Selenium, Silver, Sulfide (as S), Total Gold, Total Suspended Solids, Zinc
IN (Source)	Arsenic, Barium, Biochemical Oxygen Demand, Cadmium, Chlorine Demand, Chromium, Copper, Cyanide, EPA 1010 A, EPA 608.3, EPA 625 Phenols, EPA 8081 B, EPA 8260 D, EPA 8270 E, Fluoride, Hexavalent Chromium, Lead, Manganese, Mercury, Nickel, Non-Polar Material, pH, Residual Chlorine, Selenium, Silver, Sulfide (as S), Total Gold, Total Suspended Solids, Zinc
BT (Unfiltered)	Arsenic, Barium, Biochemical Oxygen Demand, Cadmium, Chlorine Demand, Chromium, Copper, Cyanide, EPA 1010 A, EPA 608.3, EPA 625 Phenols, EPA 8081 B, EPA 8260 D, EPA 8270 E, Fluoride, Hexavalent Chromium, Lead, Manganese, Mercury, Nickel, Non-Polar Material, pH, Residual Chlorine, Selenium, Silver, Sulfide (as S), Total Gold, Total Suspended Solids, Zinc

Samples received at 1.2 ◦ C

1.C Holding time exceeded, analyze immediate parameter.

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted. Report shall not be reproduced except in full without the written approval of the laboratory. Results related only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,



Long Island Analytical Laboratories, Inc.

Michael Veraldi - Laboratory Director

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Volatiles Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1,2-Tetrachloroethane	630-20-6	5.00	<5.00	ug/L	
1,1,1-Trichloroethane	71-55-6	5.00	<5.00	ug/L	
1,1,2,2-Tetrachloroethane	79-34-5	5.00	<5.00	ug/L	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	<5.00	ug/L	
1,1,2-Trichloroethane	79-00-5	5.00	<5.00	ug/L	
1,1-Dichloroethane	75-34-3	5.00	<5.00	ug/L	
1,1-Dichloroethene	75-35-4	5.00	<5.00	ug/L	
1,1-Dichloropropene	563-58-6	5.00	<5.00	ug/L	
1,2,3-Trichlorobenzene	87-61-6	5.00	<5.00	ug/L	
1,2,3-Trichloropropane	96-18-4	5.00	<5.00	ug/L	
1,2,4,5-Tetramethylbenzene	95-93-2	5.00	<5.00	ug/L	2.B
1,2,4-Trichlorobenzene	120-82-1	5.00	<5.00	ug/L	
1,2,4-Trimethylbenzene	95-63-6	5.00	<5.00	ug/L	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	<5.00	ug/L	
1,2-Dibromoethane	106-93-4	5.00	<5.00	ug/L	
1,2-Dichlorobenzene	95-50-1	5.00	<5.00	ug/L	
1,2-Dichloroethane	107-06-2	5.00	<5.00	ug/L	
1,2-Dichloropropane	78-87-5	5.00	<5.00	ug/L	
1,3,5-Trimethylbenzene	108-67-8	5.00	<5.00	ug/L	
1,3-Dichlorobenzene	541-73-1	5.00	<5.00	ug/L	
1,3-Dichloropropane	142-28-9	5.00	<5.00	ug/L	
1,4-Dichlorobenzene	106-46-7	5.00	<5.00	ug/L	
1,4-Diethylbenzene	105-05-5	5.00	<5.00	ug/L	2.B
1,4-Dioxane	123-91-1	100	<100	ug/L	
2,2-Dichloropropane	594-20-7	5.00	<5.00	ug/L	
2-Chloroethyl Vinyl Ether	110-75-8	5.00	<5.00	ug/L	
2-Chlorotoluene	95-49-8	5.00	<5.00	ug/L	
4-Chlorotoluene	106-43-4	5.00	<5.00	ug/L	
4-Ethyltoluene	622-96-8	5.00	<5.00	ug/L	2.B
4-Isopropyltoluene	99-87-6	5.00	7.43	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
4-Methyl-2-Pentanone	108-10-1	5.00	<5.00	ug/L	
Acetone	67-64-1	10.0	260	ug/L	4.A, 4.G
Acrolein	107-02-8	5.00	<5.00	ug/L	4.J, 4.N
Acrylonitrile	107-13-1	5.00	<5.00	ug/L	
Benzene	71-43-2	5.00	<5.00	ug/L	
Bromobenzene	108-86-1	5.00	<5.00	ug/L	
Bromochloromethane	74-97-5	5.00	<5.00	ug/L	
Bromodichloromethane	75-27-4	5.00	155	ug/L	4.G
Bromoform	75-25-2	5.00	<5.00	ug/L	
Bromomethane	74-83-9	5.00	<5.00	ug/L	
Carbon disulfide	75-15-0	5.00	<5.00	ug/L	
Carbon Tetrachloride	56-23-5	5.00	11.4	ug/L	
Chlorobenzene	108-90-7	5.00	<5.00	ug/L	
Chlorodifluoromethane	75-45-6	5.00	<5.00	ug/L	2.B
Chloroethane	75-00-3	5.00	108	ug/L	
Chloroform	67-66-3	5.00	1950	ug/L	4.A, 4.G
Chloromethane	74-87-3	5.00	50.3	ug/L	
cis-1,2-Dichloroethene	156-59-2	5.00	<5.00	ug/L	
cis-1,3-Dichloropropene	10061-01-5	5.00	<5.00	ug/L	
Dibromochloromethane	124-48-1	5.00	15.8	ug/L	
Dibromomethane	74-95-3	5.00	<5.00	ug/L	4.G
Dichlorodifluoromethane	75-71-8	5.00	<5.00	ug/L	
Ethylbenzene	100-41-4	5.00	<5.00	ug/L	
Hexachlorobutadiene	87-68-3	5.00	<5.00	ug/L	
Isopropylbenzene (Cumene)	98-82-8	5.00	<5.00	ug/L	
m,p-Xylenes	108-38-3/106-42-3	10.0	<10.0	ug/L	
Methyl Acetate	79-20-9	5.00	<5.00	ug/L	4.K
Methyl Butyl Ketone (2-Hexanone)	591-78-6	10.0	<10.0	ug/L	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.0	20.2	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Methylene Chloride	75-09-2	5.00	<5.00	ug/L	
Methyl-tert-Butyl Ether	1634-04-4	5.00	<5.00	ug/L	
Naphthalene	91-20-3	5.00	<5.00	ug/L	
n-Butylbenzene	104-51-8	5.00	<5.00	ug/L	
n-Propylbenzene	103-65-1	5.00	<5.00	ug/L	
o-Xylene	95-47-6	5.00	<5.00	ug/L	
sec-Butylbenzene	135-98-8	5.00	<5.00	ug/L	
Styrene	100-42-5	5.00	<5.00	ug/L	
tert-Butyl alcohol	75-65-0	5.00	<5.00	ug/L	
tert-Butylbenzene	98-06-6	5.00	<5.00	ug/L	
Tetrachloroethene	127-18-4	5.00	<5.00	ug/L	
Toluene	108-88-3	5.00	<5.00	ug/L	
trans-1,2-Dichloroethene	156-60-5	5.00	<5.00	ug/L	
trans-1,3-Dichloropropene	10061-02-6	5.00	<5.00	ug/L	
Trichloroethene	79-01-6	5.00	<5.00	ug/L	
Trichlorofluoromethane	75-69-4	5.00	<5.00	ug/L	
Vinyl Acetate	108-05-4	5.00	<5.00	ug/L	
Vinyl chloride	75-01-4	5.00	<5.00	ug/L	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	107	74.4-131	
4-Bromofluorobenzene	460-00-4	98	82.3-134	
Dibromofluoromethane	1868-53-7	98	79.4-122	
Toluene-d8	2037-26-5	105	85-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	79	50-200	
1,4-Difluorobenzene	540-36-3	90	50-200	
Chlorobenzene-d5	3114-55-4	84	50-200	
Pentafluorobenzene	363-72-4	101	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 5030 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8260 D

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-Trichlorophenol	95-95-4	10.0	<10.0	ug/L	
2,4,6-Trichlorophenol	88-06-2	10.0	<10.0	ug/L	
2,4-Dichlorophenol	120-83-2	10.0	<10.0	ug/L	
2,4-Dimethylphenol	105-67-9	10.0	<10.0	ug/L	
2,4-Dinitrophenol	51-28-5	20.0	<20.0	ug/L	
2-Chlorophenol	95-57-8	10.0	<10.0	ug/L	
2-Methylphenol	95-48-7	10.0	<10.0	ug/L	
2-Nitrophenol	88-75-5	10.0	<10.0	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	10.0	<10.0	ug/L	
4,6-Dinitro-2-methylphenol	534-52-1	20.0	<20.0	ug/L	
4-Chloro-3-methylphenol	59-50-7	10.0	<10.0	ug/L	
4-Nitrophenol	100-02-7	10.0	<10.0	ug/L	
Pentachlorophenol	87-86-5	10.0	<10.0	ug/L	4.K
Phenol	108-95-2	10.0	<10.0	ug/L	4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	71	10.2-125	4.K
2-Fluorophenol	367-12-4	24	16.4-86.6	
Phenol-d6	13127-88-3	16	17.9-85.3	4.D

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	80	50-200	
Acenaphthene-d10	15067-26-2	74	50-200	
Chrysene-d12	1719-03-5	118	50-200	
Naphthalene-d8	1146-65-2	78	50-200	
Perylene-d12	1520-96-3	116	50-200	
Phenanthrene-d10	1517-22-2	65	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 625.1

Date Analyzed: 10/27/2020

Analytical Method: EPA 625.1

Parameter	CAS No.	LOQ	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	2.50	<2.50	ug/L	
1,2-Dichlorobenzene	95-50-1	2.50	<2.50	ug/L	
1,3-Dichlorobenzene	541-73-1	2.50	<2.50	ug/L	
1,4-Dichlorobenzene	106-46-7	2.50	<2.50	ug/L	
2,2'-Oxybis(1-Chloropropane)	108-60-1	2.50	<2.50	ug/L	4.J
2,4,5-Trichlorophenol	95-95-4	2.50	<2.50	ug/L	
2,4,6-Trichlorophenol	88-06-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4-Dichlorophenol	120-83-2	2.50	<2.50	ug/L	
2,4-Dimethylphenol	105-67-9	2.50	<2.50	ug/L	
2,4-Dinitrophenol	51-28-5	5.00	<5.00	ug/L	
2,4-Dinitrotoluene	121-14-2	2.50	<2.50	ug/L	
2,6-Dinitrotoluene	606-20-2	2.50	<2.50	ug/L	
2-Chloronaphthalene	91-58-7	2.50	<2.50	ug/L	
2-Chlorophenol	95-57-8	2.50	<2.50	ug/L	
2-Methylnaphthalene	91-57-6	2.50	<2.50	ug/L	
2-Methylphenol	95-48-7	2.50	<2.50	ug/L	
2-Nitroaniline	88-74-4	2.50	<2.50	ug/L	
2-Nitrophenol	88-75-5	2.50	<2.50	ug/L	
3,3'-Dichlorobenzidine	91-94-1	2.50	<2.50	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	2.50	<2.50	ug/L	
3-Nitroaniline	99-09-2	2.50	<2.50	ug/L	4.J
4,6-Dinitro-2-methylphenol	534-52-1	5.00	5.41	ug/L	
4-Bromophenyl phenyl ether	101-55-3	2.50	<2.50	ug/L	
4-Chloro-3-methylphenol	59-50-7	2.50	2.70	ug/L	
4-Chloroaniline	106-47-8	2.50	<2.50	ug/L	
4-Chlorophenyl phenyl ether	7005-72-3	2.50	<2.50	ug/L	
4-Nitroaniline	100-01-6	2.50	<2.50	ug/L	
4-Nitrophenol	100-02-7	2.50	4.02	ug/L	4.C
Acenaphthene	83-32-9	2.50	<2.50	ug/L	
Acenaphthylene	208-96-8	2.50	<2.50	ug/L	
Aniline	62-53-3	2.50	<2.50	ug/L	
Anthracene	120-12-7	2.50	<2.50	ug/L	
Benzo(a)anthracene	56-55-3	2.50	<2.50	ug/L	
Benzo(a)pyrene	50-32-8	2.50	3.68	ug/L	4.C
Benzo(b)fluoranthene	205-99-2	2.50	2.83	ug/L	4.C
Benzo(g,h,i)perylene	191-24-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Benzo(k)fluoranthene	207-08-9	2.50	<2.50	ug/L	
Benzoic Acid	65-85-0	5.00	83.6	ug/L	4.C, 4.K, 4.M
Benzyl alcohol	100-51-6	2.50	<2.50	ug/L	
bis(2-Chloroethoxy)methane	111-91-1	2.50	<2.50	ug/L	
Bis(2-Chloroethyl)ether	111-44-4	2.50	<2.50	ug/L	
Bis(2-Ethylhexyl)phthalate	117-81-7	2.50	5.51	ug/L	4.C
Butyl benzyl phthalate	85-68-7	2.50	3.70	ug/L	4.C
Carbazole	86-74-8	2.50	<2.50	ug/L	
Chrysene	218-01-9	2.50	<2.50	ug/L	
Dibenzo(a,h)anthracene	53-70-3	2.50	<2.50	ug/L	
Dibenzofuran	132-64-9	2.50	<2.50	ug/L	
Diethyl phthalate	84-66-2	2.50	<2.50	ug/L	
Dimethyl phthalate	131-11-3	2.50	<2.50	ug/L	
Di-n-butyl phthalate	84-74-2	2.50	3.20	ug/L	4.C
Di-n-octyl phthalate	117-84-0	2.50	6.03	ug/L	4.C
Fluoranthene	206-44-0	2.50	<2.50	ug/L	
Fluorene	86-73-7	2.50	<2.50	ug/L	
Hexachlorobenzene	118-74-1	2.50	<2.50	ug/L	
Hexachlorobutadiene	87-68-3	2.50	<2.50	ug/L	
Hexachlorocyclopentadiene	77-47-4	2.50	<2.50	ug/L	
Hexachloroethane	67-72-1	2.50	<2.50	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	2.50	<2.50	ug/L	4.C, 4.J
Isophorone	78-59-1	2.50	<2.50	ug/L	
Naphthalene	91-20-3	2.50	<2.50	ug/L	
Nitrobenzene	98-95-3	2.50	<2.50	ug/L	
N-Nitrosodimethylamine	62-75-9	2.50	<2.50	ug/L	
N-Nitroso-di-n-propylamine	621-64-7	2.50	<2.50	ug/L	
N-Nitrosodiphenylamine	86-30-6	2.50	<2.50	ug/L	
Pentachlorophenol	87-86-5	2.50	<2.50	ug/L	4.K

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Phenanthrene	85-01-8	2.50	<2.50	ug/L	
Phenol	108-95-2	2.50	<2.50	ug/L	4.M
Pyrene	129-00-0	2.50	<2.50	ug/L	
Pyridine	110-86-1	5.00	<5.00	ug/L	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	71	38.5-145	4.K
2-Fluorobiphenyl	321-60-8	47	40.4-114	
2-Fluorophenol	367-12-4	24	12.7-89.3	
Nitrobenzene-d5	4165-60-0	57	47.3-131	
Phenol-d6	13127-88-3	16	7.73-72.3	
Terphenyl-d14	1718-51-0	36	45.7-139	4.D

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	80	50-200	
Acenaphthene-d10	15067-26-2	74	50-200	
Chrysene-d12	1719-03-5	118	50-200	
Naphthalene-d8	1146-65-2	78	50-200	
Perylene-d12	1520-96-3	116	50-200	
Phenanthrene-d10	1517-22-2	65	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8270 E

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.00	<2.00	ug/L	
4,4'-DDE	72-55-9	2.00	<2.00	ug/L	
4,4'-DDT	50-29-3	2.00	<2.00	ug/L	
Aldrin	309-00-2	2.00	<2.00	ug/L	
alpha-BHC	319-84-6	2.00	<2.00	ug/L	
beta-BHC	319-85-7	2.00	<2.00	ug/L	
Chlordane	12789-03-6	2.00	<2.00	ug/L	
cis-Chlordane	5103-71-9	2.00	<2.00	ug/L	
delta-BHC	319-86-8	2.00	<2.00	ug/L	
Dieldrin	60-57-1	2.00	<2.00	ug/L	
Endosulfan I	959-98-8	2.00	<2.00	ug/L	
Endosulfan II	33213-65-9	2.00	<2.00	ug/L	
Endosulfan Sulfate	1031-07-8	2.00	<2.00	ug/L	
Endrin	72-20-8	2.00	<2.00	ug/L	
Endrin Aldehyde	7421-93-4	2.00	<2.00	ug/L	
Endrin Ketone	53494-70-5	2.00	<2.00	ug/L	
gamma-BHC	58-89-9	2.00	<2.00	ug/L	
Heptachlor	76-44-8	2.00	<2.00	ug/L	
Heptachlor Epoxide	1024-57-3	2.00	<2.00	ug/L	
Methoxychlor	72-43-5	2.00	<2.00	ug/L	
Toxaphene	8001-35-2	2.00	<2.00	ug/L	
trans-Chlordane	5103-74-2	2.00	<2.00	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/28/2020

Analytical Method: EPA 8081 B

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	0.500	<0.500	ug/L	
Aroclor-1221	11104-28-2	0.500	<0.500	ug/L	
Aroclor-1232	11141-16-5	0.500	<0.500	ug/L	
Aroclor-1242	53469-21-9	0.500	<0.500	ug/L	
Aroclor-1248	12672-29-6	0.500	<0.500	ug/L	
Aroclor-1254	11097-69-1	0.500	<0.500	ug/L	
Aroclor-1260	11096-82-5	0.500	<0.500	ug/L	
Aroclor-1262	37324-23-5	0.500	<0.500	ug/L	
Aroclor-1268	11100-14-4	0.500	<0.500	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 608.3

Date Analyzed: 10/28/2020

Analytical Method: EPA 608.3

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Barium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Cadmium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Chromium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Copper	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Gold	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.25	<0.25	mg/L	
Lead	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.07	mg/L	
Manganese	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.12	mg/L	
Nickel	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Selenium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Silver	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	4.C
Zinc	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.05	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 200.2

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	10/28/2020	EPA 245.1, Rev. 3.0(1994)	0.002	<0.002	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 245.1

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	10/27/2020	EPA 7196 A	0.100	<0.100	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Prep Metals

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	10/27/2020	SM 4500-CN E-2011	0.02	0.03	mg/L	

Date Prepared: 10/27/2020 Preparation Method: Distillation Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

Ion Chromatography Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Fluoride	10/27/2020 11:24	EPA 300.0 Rev. 2.1(1993)	0.100	<0.100	mg/L	4.G

Date Prepared: 10/27/2020

Preparation Method: IC PW Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:40	Sample ID: Tote (Filtered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-01
Matrix: Non-Potable Water	ELAP: #11693

General Chemistry Parameters

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Flashpoint	10/27/2020 16:07	EPA 1010 A	75.0	>140	°F	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Recoverable Petroleum Hydrocarbons	10/27/2020 16:08	EPA 1664 A	5.00	<5.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA1664

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Chlorine Demand	10/27/2020 16:05	SM 18-21 2350 B	2.0	2.6	mg/L	2.B

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Residual Chlorine	10/27/2020 17:24	SM 18-21 4500-Cl G (00)	0.10	1.2	mg/L	1.C

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
pH	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	8.07	units	1.C, 2.B
Temperature @ pH in C	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	23.70	units	1.C, 2.B

Date Prepared: 10/27/2020 Preparation Method: pH- No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Suspended Solids	10/27/2020 16:03	SM 2540 D-2011	2.50	<2.50	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Sulfide	10/27/2020 16:05	SM 4500-S2- F-2011	2.00	<2.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Biochemical Oxygen Demand	10/28/2020 08:55	SM 5210B-2011	4.00	44.8	mg/L	4.N

Date Prepared: 10/28/2020 Preparation Method: No Preparation

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Volatiles Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1,2-Tetrachloroethane	630-20-6	5.00	<5.00	ug/L	
1,1,1-Trichloroethane	71-55-6	5.00	<5.00	ug/L	
1,1,2,2-Tetrachloroethane	79-34-5	5.00	<5.00	ug/L	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	<5.00	ug/L	
1,1,2-Trichloroethane	79-00-5	5.00	<5.00	ug/L	
1,1-Dichloroethane	75-34-3	5.00	<5.00	ug/L	
1,1-Dichloroethene	75-35-4	5.00	<5.00	ug/L	
1,1-Dichloropropene	563-58-6	5.00	<5.00	ug/L	
1,2,3-Trichlorobenzene	87-61-6	5.00	<5.00	ug/L	
1,2,3-Trichloropropane	96-18-4	5.00	<5.00	ug/L	
1,2,4,5-Tetramethylbenzene	95-93-2	5.00	<5.00	ug/L	2.B
1,2,4-Trichlorobenzene	120-82-1	5.00	<5.00	ug/L	
1,2,4-Trimethylbenzene	95-63-6	5.00	<5.00	ug/L	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	<5.00	ug/L	
1,2-Dibromoethane	106-93-4	5.00	<5.00	ug/L	
1,2-Dichlorobenzene	95-50-1	5.00	<5.00	ug/L	
1,2-Dichloroethane	107-06-2	5.00	<5.00	ug/L	
1,2-Dichloropropane	78-87-5	5.00	<5.00	ug/L	
1,3,5-Trimethylbenzene	108-67-8	5.00	<5.00	ug/L	
1,3-Dichlorobenzene	541-73-1	5.00	<5.00	ug/L	
1,3-Dichloropropane	142-28-9	5.00	<5.00	ug/L	
1,4-Dichlorobenzene	106-46-7	5.00	<5.00	ug/L	
1,4-Diethylbenzene	105-05-5	5.00	<5.00	ug/L	2.B
1,4-Dioxane	123-91-1	100	<100	ug/L	
2,2-Dichloropropane	594-20-7	5.00	<5.00	ug/L	
2-Chloroethyl Vinyl Ether	110-75-8	5.00	<5.00	ug/L	
2-Chlorotoluene	95-49-8	5.00	<5.00	ug/L	
4-Chlorotoluene	106-43-4	5.00	<5.00	ug/L	
4-Ethyltoluene	622-96-8	5.00	<5.00	ug/L	2.B
4-Isopropyltoluene	99-87-6	5.00	<5.00	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
4-Methyl-2-Pentanone	108-10-1	5.00	<5.00	ug/L	
Acetone	67-64-1	10.0	<10.0	ug/L	
Acrolein	107-02-8	5.00	<5.00	ug/L	4.J, 4.N
Acrylonitrile	107-13-1	5.00	<5.00	ug/L	
Benzene	71-43-2	5.00	<5.00	ug/L	
Bromobenzene	108-86-1	5.00	<5.00	ug/L	
Bromochloromethane	74-97-5	5.00	<5.00	ug/L	
Bromodichloromethane	75-27-4	5.00	<5.00	ug/L	
Bromoform	75-25-2	5.00	6.87	ug/L	
Bromomethane	74-83-9	5.00	<5.00	ug/L	
Carbon disulfide	75-15-0	5.00	<5.00	ug/L	
Carbon Tetrachloride	56-23-5	5.00	<5.00	ug/L	
Chlorobenzene	108-90-7	5.00	<5.00	ug/L	
Chlorodifluoromethane	75-45-6	5.00	<5.00	ug/L	2.B
Chloroethane	75-00-3	5.00	<5.00	ug/L	
Chloroform	67-66-3	5.00	<5.00	ug/L	
Chloromethane	74-87-3	5.00	<5.00	ug/L	
cis-1,2-Dichloroethene	156-59-2	5.00	<5.00	ug/L	
cis-1,3-Dichloropropene	10061-01-5	5.00	<5.00	ug/L	
Dibromochloromethane	124-48-1	5.00	<5.00	ug/L	
Dibromomethane	74-95-3	5.00	<5.00	ug/L	
Dichlorodifluoromethane	75-71-8	5.00	<5.00	ug/L	
Ethylbenzene	100-41-4	5.00	<5.00	ug/L	
Hexachlorobutadiene	87-68-3	5.00	<5.00	ug/L	
Isopropylbenzene (Cumene)	98-82-8	5.00	<5.00	ug/L	
m,p-Xylenes	108-38-3/106-42-3	10.0	<10.0	ug/L	
Methyl Acetate	79-20-9	5.00	<5.00	ug/L	4.K
Methyl Butyl Ketone (2-Hexanone)	591-78-6	10.0	<10.0	ug/L	
Methyl Ethyl Ketone (2-Butanone)	78-93-3	10.0	<10.0	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Methylene Chloride	75-09-2	5.00	<5.00	ug/L	
Methyl-tert-Butyl Ether	1634-04-4	5.00	<5.00	ug/L	
Naphthalene	91-20-3	5.00	<5.00	ug/L	
n-Butylbenzene	104-51-8	5.00	<5.00	ug/L	
n-Propylbenzene	103-65-1	5.00	<5.00	ug/L	
o-Xylene	95-47-6	5.00	<5.00	ug/L	
sec-Butylbenzene	135-98-8	5.00	<5.00	ug/L	
Styrene	100-42-5	5.00	<5.00	ug/L	
tert-Butyl alcohol	75-65-0	5.00	<5.00	ug/L	
tert-Butylbenzene	98-06-6	5.00	<5.00	ug/L	
Tetrachloroethene	127-18-4	5.00	<5.00	ug/L	
Toluene	108-88-3	5.00	<5.00	ug/L	
trans-1,2-Dichloroethene	156-60-5	5.00	<5.00	ug/L	
trans-1,3-Dichloropropene	10061-02-6	5.00	<5.00	ug/L	
Trichloroethene	79-01-6	5.00	<5.00	ug/L	
Trichlorofluoromethane	75-69-4	5.00	<5.00	ug/L	
Vinyl Acetate	108-05-4	5.00	<5.00	ug/L	
Vinyl chloride	75-01-4	5.00	<5.00	ug/L	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	105	74.4-131	
4-Bromofluorobenzene	460-00-4	102	82.3-134	
Dibromofluoromethane	1868-53-7	106	79.4-122	
Toluene-d8	2037-26-5	104	85-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	74	50-200	
1,4-Difluorobenzene	540-36-3	88	50-200	
Chlorobenzene-d5	3114-55-4	82	50-200	
Pentafluorobenzene	363-72-4	87	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 5030 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8260 D

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-Trichlorophenol	95-95-4	10.0	<10.0	ug/L	
2,4,6-Trichlorophenol	88-06-2	10.0	<10.0	ug/L	
2,4-Dichlorophenol	120-83-2	10.0	<10.0	ug/L	
2,4-Dimethylphenol	105-67-9	10.0	<10.0	ug/L	
2,4-Dinitrophenol	51-28-5	20.0	<20.0	ug/L	
2-Chlorophenol	95-57-8	10.0	<10.0	ug/L	
2-Methylphenol	95-48-7	10.0	<10.0	ug/L	
2-Nitrophenol	88-75-5	10.0	<10.0	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	10.0	<10.0	ug/L	
4,6-Dinitro-2-methylphenol	534-52-1	20.0	<20.0	ug/L	
4-Chloro-3-methylphenol	59-50-7	10.0	<10.0	ug/L	
4-Nitrophenol	100-02-7	10.0	<10.0	ug/L	
Pentachlorophenol	87-86-5	10.0	<10.0	ug/L	4.K
Phenol	108-95-2	10.0	<10.0	ug/L	4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	77	10.2-125	4.K
2-Fluorophenol	367-12-4	5	16.4-86.6	4.D
Phenol-d6	13127-88-3	0.5	17.9-85.3	4.D

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	78	50-200	
Acenaphthene-d10	15067-26-2	73	50-200	
Chrysene-d12	1719-03-5	103	50-200	
Naphthalene-d8	1146-65-2	75	50-200	
Perylene-d12	1520-96-3	102	50-200	
Phenanthrene-d10	1517-22-2	64	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 625.1

Date Analyzed: 10/27/2020

Analytical Method: EPA 625.1

Parameter	CAS No.	LOQ	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	2.50	<2.50	ug/L	
1,2-Dichlorobenzene	95-50-1	2.50	<2.50	ug/L	
1,3-Dichlorobenzene	541-73-1	2.50	<2.50	ug/L	
1,4-Dichlorobenzene	106-46-7	2.50	<2.50	ug/L	
2,2'-Oxybis(1-Chloropropane)	108-60-1	2.50	<2.50	ug/L	4.J
2,4,5-Trichlorophenol	95-95-4	2.50	<2.50	ug/L	
2,4,6-Trichlorophenol	88-06-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4-Dichlorophenol	120-83-2	2.50	<2.50	ug/L	
2,4-Dimethylphenol	105-67-9	2.50	<2.50	ug/L	
2,4-Dinitrophenol	51-28-5	5.00	<5.00	ug/L	
2,4-Dinitrotoluene	121-14-2	2.50	<2.50	ug/L	
2,6-Dinitrotoluene	606-20-2	2.50	<2.50	ug/L	
2-Chloronaphthalene	91-58-7	2.50	<2.50	ug/L	
2-Chlorophenol	95-57-8	2.50	<2.50	ug/L	
2-Methylnaphthalene	91-57-6	2.50	<2.50	ug/L	
2-Methylphenol	95-48-7	2.50	<2.50	ug/L	
2-Nitroaniline	88-74-4	2.50	<2.50	ug/L	
2-Nitrophenol	88-75-5	2.50	<2.50	ug/L	
3,3'-Dichlorobenzidine	91-94-1	2.50	<2.50	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	2.50	<2.50	ug/L	
3-Nitroaniline	99-09-2	2.50	<2.50	ug/L	4.J
4,6-Dinitro-2-methylphenol	534-52-1	5.00	5.30	ug/L	
4-Bromophenyl phenyl ether	101-55-3	2.50	<2.50	ug/L	
4-Chloro-3-methylphenol	59-50-7	2.50	<2.50	ug/L	
4-Chloroaniline	106-47-8	2.50	<2.50	ug/L	
4-Chlorophenyl phenyl ether	7005-72-3	2.50	<2.50	ug/L	
4-Nitroaniline	100-01-6	2.50	<2.50	ug/L	
4-Nitrophenol	100-02-7	2.50	<2.50	ug/L	4.C
Acenaphthene	83-32-9	2.50	<2.50	ug/L	
Acenaphthylene	208-96-8	2.50	<2.50	ug/L	
Aniline	62-53-3	2.50	<2.50	ug/L	
Anthracene	120-12-7	2.50	<2.50	ug/L	
Benzo(a)anthracene	56-55-3	2.50	<2.50	ug/L	
Benzo(a)pyrene	50-32-8	2.50	3.60	ug/L	4.C
Benzo(b)fluoranthene	205-99-2	2.50	2.82	ug/L	4.C
Benzo(g,h,i)perylene	191-24-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Benzo(k)fluoranthene	207-08-9	2.50	<2.50	ug/L	
Benzoic Acid	65-85-0	5.00	<5.00	ug/L	4.C, 4.K, 4.M
Benzyl alcohol	100-51-6	2.50	<2.50	ug/L	
bis(2-Chloroethoxy)methane	111-91-1	2.50	<2.50	ug/L	
Bis(2-Chloroethyl)ether	111-44-4	2.50	<2.50	ug/L	
Bis(2-Ethylhexyl)phthalate	117-81-7	2.50	4.94	ug/L	4.C
Butyl benzyl phthalate	85-68-7	2.50	3.48	ug/L	4.C
Carbazole	86-74-8	2.50	<2.50	ug/L	
Chrysene	218-01-9	2.50	<2.50	ug/L	
Dibenzo(a,h)anthracene	53-70-3	2.50	<2.50	ug/L	
Dibenzofuran	132-64-9	2.50	<2.50	ug/L	
Diethyl phthalate	84-66-2	2.50	<2.50	ug/L	
Dimethyl phthalate	131-11-3	2.50	<2.50	ug/L	
Di-n-butyl phthalate	84-74-2	2.50	3.24	ug/L	4.C
Di-n-octyl phthalate	117-84-0	2.50	3.92	ug/L	4.C
Fluoranthene	206-44-0	2.50	<2.50	ug/L	
Fluorene	86-73-7	2.50	<2.50	ug/L	
Hexachlorobenzene	118-74-1	2.50	<2.50	ug/L	
Hexachlorobutadiene	87-68-3	2.50	<2.50	ug/L	
Hexachlorocyclopentadiene	77-47-4	2.50	<2.50	ug/L	
Hexachloroethane	67-72-1	2.50	<2.50	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	2.50	<2.50	ug/L	4.C, 4.J
Isophorone	78-59-1	2.50	<2.50	ug/L	
Naphthalene	91-20-3	2.50	<2.50	ug/L	
Nitrobenzene	98-95-3	2.50	<2.50	ug/L	
N-Nitrosodimethylamine	62-75-9	2.50	<2.50	ug/L	
N-Nitroso-di-n-propylamine	621-64-7	2.50	<2.50	ug/L	
N-Nitrosodiphenylamine	86-30-6	2.50	<2.50	ug/L	
Pentachlorophenol	87-86-5	2.50	<2.50	ug/L	4.K

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Phenanthrene	85-01-8	2.50	<2.50	ug/L	
Phenol	108-95-2	2.50	<2.50	ug/L	4.M
Pyrene	129-00-0	2.50	<2.50	ug/L	
Pyridine	110-86-1	5.00	<5.00	ug/L	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	77	38.5-145	4.K
2-Fluorobiphenyl	321-60-8	57	40.4-114	
2-Fluorophenol	367-12-4	5	12.7-89.3	4.D
Nitrobenzene-d5	4165-60-0	61	47.3-131	
Phenol-d6	13127-88-3	0.5	7.73-72.3	4.D
Terphenyl-d14	1718-51-0	45	45.7-139	4.D

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	78	50-200	
Acenaphthene-d10	15067-26-2	73	50-200	
Chrysene-d12	1719-03-5	103	50-200	
Naphthalene-d8	1146-65-2	75	50-200	
Perylene-d12	1520-96-3	102	50-200	
Phenanthrene-d10	1517-22-2	64	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8270 E

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.00	<2.00	ug/L	
4,4'-DDE	72-55-9	2.00	<2.00	ug/L	
4,4'-DDT	50-29-3	2.00	<2.00	ug/L	
Aldrin	309-00-2	2.00	<2.00	ug/L	
alpha-BHC	319-84-6	2.00	<2.00	ug/L	
beta-BHC	319-85-7	2.00	<2.00	ug/L	
Chlordane	12789-03-6	2.00	<2.00	ug/L	
cis-Chlordane	5103-71-9	2.00	<2.00	ug/L	
delta-BHC	319-86-8	2.00	<2.00	ug/L	
Dieldrin	60-57-1	2.00	<2.00	ug/L	
Endosulfan I	959-98-8	2.00	<2.00	ug/L	
Endosulfan II	33213-65-9	2.00	<2.00	ug/L	
Endosulfan Sulfate	1031-07-8	2.00	<2.00	ug/L	
Endrin	72-20-8	2.00	<2.00	ug/L	
Endrin Aldehyde	7421-93-4	2.00	<2.00	ug/L	
Endrin Ketone	53494-70-5	2.00	<2.00	ug/L	
gamma-BHC	58-89-9	2.00	<2.00	ug/L	
Heptachlor	76-44-8	2.00	<2.00	ug/L	
Heptachlor Epoxide	1024-57-3	2.00	<2.00	ug/L	
Methoxychlor	72-43-5	2.00	<2.00	ug/L	
Toxaphene	8001-35-2	2.00	<2.00	ug/L	
trans-Chlordane	5103-74-2	2.00	<2.00	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/28/2020

Analytical Method: EPA 8081 B

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	0.500	<0.500	ug/L	
Aroclor-1221	11104-28-2	0.500	<0.500	ug/L	
Aroclor-1232	11141-16-5	0.500	<0.500	ug/L	
Aroclor-1242	53469-21-9	0.500	<0.500	ug/L	
Aroclor-1248	12672-29-6	0.500	<0.500	ug/L	
Aroclor-1254	11097-69-1	0.500	<0.500	ug/L	
Aroclor-1260	11096-82-5	0.500	<0.500	ug/L	
Aroclor-1262	37324-23-5	0.500	<0.500	ug/L	
Aroclor-1268	11100-14-4	0.500	<0.500	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 608.3

Date Analyzed: 10/28/2020

Analytical Method: EPA 608.3

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Barium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Cadmium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Chromium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Copper	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Gold	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.25	<0.25	mg/L	
Lead	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.10	mg/L	
Manganese	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.16	mg/L	
Nickel	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Selenium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Silver	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	4.C
Zinc	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.14	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 200.2

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	10/28/2020	EPA 245.1, Rev. 3.0(1994)	0.002	<0.002	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 245.1

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	10/27/2020	EPA 7196 A	0.100	<0.100	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Prep Metals

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	10/27/2020	SM 4500-CN E-2011	0.02	<0.02	mg/L	

Date Prepared: 10/27/2020 Preparation Method: Distillation Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

Ion Chromatography Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Fluoride	10/27/2020 11:44	EPA 300.0 Rev. 2.1(1993)	0.100	<0.100	mg/L	

Date Prepared: 10/27/2020

Preparation Method: IC PW Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:41	Sample ID: IN (Source)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-02
Matrix: Non-Potable Water	ELAP: #11693

General Chemistry Parameters

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Flashpoint	10/27/2020 16:07	EPA 1010 A	75.0	>140	°F	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Recoverable Petroleum Hydrocarbons	10/27/2020 16:08	EPA 1664 A	5.00	<5.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA1664

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Chlorine Demand	10/27/2020 16:05	SM 18-21 2350 B	2.0	3.1	mg/L	2.B

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Residual Chlorine	10/27/2020 17:24	SM 18-21 4500-Cl G (00)	0.10	1.3	mg/L	1.C

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
pH	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	8.40	units	1.C, 2.B
Temperature @ pH in C	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	23.90	units	1.C, 2.B

Date Prepared: 10/27/2020 Preparation Method: pH- No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Suspended Solids	10/27/2020 16:03	SM 2540 D-2011	2.50	<2.50	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Sulfide	10/27/2020 16:05	SM 4500-S2- F-2011	2.00	<2.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Biochemical Oxygen Demand	10/28/2020 08:55	SM 5210B-2011	4.00	<4.00	mg/L	4.I, 4.N

Date Prepared: 10/28/2020 Preparation Method: No Preparation

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Volatiles Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
1,1,1,2-Tetrachloroethane	630-20-6	10.0	<10.0	ug/L	3.B
1,1,1-Trichloroethane	71-55-6	10.0	<10.0	ug/L	3.B
1,1,2,2-Tetrachloroethane	79-34-5	10.0	<10.0	ug/L	3.B
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	10.0	<10.0	ug/L	3.B
1,1,2-Trichloroethane	79-00-5	10.0	<10.0	ug/L	3.B
1,1-Dichloroethane	75-34-3	10.0	<10.0	ug/L	3.B
1,1-Dichloroethene	75-35-4	10.0	<10.0	ug/L	3.B
1,1-Dichloropropene	563-58-6	10.0	<10.0	ug/L	3.B
1,2,3-Trichlorobenzene	87-61-6	10.0	<10.0	ug/L	3.B
1,2,3-Trichloropropane	96-18-4	10.0	<10.0	ug/L	3.B
1,2,4,5-Tetramethylbenzene	95-93-2	10.0	<10.0	ug/L	2.B, 3.B
1,2,4-Trichlorobenzene	120-82-1	10.0	<10.0	ug/L	3.B
1,2,4-Trimethylbenzene	95-63-6	10.0	<10.0	ug/L	3.B
1,2-Dibromo-3-chloropropane	96-12-8	10.0	<10.0	ug/L	3.B
1,2-Dibromoethane	106-93-4	10.0	<10.0	ug/L	3.B
1,2-Dichlorobenzene	95-50-1	10.0	<10.0	ug/L	3.B
1,2-Dichloroethane	107-06-2	10.0	<10.0	ug/L	3.B
1,2-Dichloropropane	78-87-5	10.0	<10.0	ug/L	3.B
1,3,5-Trimethylbenzene	108-67-8	10.0	<10.0	ug/L	3.B
1,3-Dichlorobenzene	541-73-1	10.0	<10.0	ug/L	3.B
1,3-Dichloropropane	142-28-9	10.0	<10.0	ug/L	3.B
1,4-Dichlorobenzene	106-46-7	10.0	<10.0	ug/L	3.B
1,4-Diethylbenzene	105-05-5	10.0	<10.0	ug/L	2.B, 3.B
1,4-Dioxane	123-91-1	200	<200	ug/L	3.B
2,2-Dichloropropane	594-20-7	10.0	<10.0	ug/L	3.B
2-Chloroethyl Vinyl Ether	110-75-8	10.0	<10.0	ug/L	3.B
2-Chlorotoluene	95-49-8	10.0	<10.0	ug/L	3.B
4-Chlorotoluene	106-43-4	10.0	<10.0	ug/L	3.B
4-Ethyltoluene	622-96-8	10.0	<10.0	ug/L	2.B, 3.B
4-Isopropyltoluene	99-87-6	10.0	<10.0	ug/L	3.B

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
4-Methyl-2-Pentanone	108-10-1	10.0	47.5	ug/L	3.E
Acetone	67-64-1	20.0	37.4	ug/L	3.E
Acrolein	107-02-8	10.0	<10.0	ug/L	4.J, 4.N, 3.B
Acrylonitrile	107-13-1	10.0	<10.0	ug/L	3.B
Benzene	71-43-2	10.0	<10.0	ug/L	3.B
Bromobenzene	108-86-1	10.0	<10.0	ug/L	3.B
Bromochloromethane	74-97-5	10.0	<10.0	ug/L	3.B
Bromodichloromethane	75-27-4	10.0	<10.0	ug/L	3.B
Bromoform	75-25-2	10.0	<10.0	ug/L	3.B
Bromomethane	74-83-9	10.0	<10.0	ug/L	3.B
Carbon disulfide	75-15-0	10.0	<10.0	ug/L	3.B
Carbon Tetrachloride	56-23-5	10.0	<10.0	ug/L	3.B
Chlorobenzene	108-90-7	10.0	<10.0	ug/L	3.B
Chlorodifluoromethane	75-45-6	10.0	<10.0	ug/L	2.B, 3.B
Chloroethane	75-00-3	10.0	<10.0	ug/L	3.B
Chloroform	67-66-3	10.0	<10.0	ug/L	3.B
Chloromethane	74-87-3	10.0	<10.0	ug/L	3.B
cis-1,2-Dichloroethene	156-59-2	10.0	<10.0	ug/L	3.B
cis-1,3-Dichloropropene	10061-01-5	10.0	<10.0	ug/L	3.B
Dibromochloromethane	124-48-1	10.0	<10.0	ug/L	3.B
Dibromomethane	74-95-3	10.0	<10.0	ug/L	3.B
Dichlorodifluoromethane	75-71-8	10.0	<10.0	ug/L	3.B
Ethylbenzene	100-41-4	10.0	<10.0	ug/L	3.B
Hexachlorobutadiene	87-68-3	10.0	<10.0	ug/L	3.B
Isopropylbenzene (Cumene)	98-82-8	10.0	<10.0	ug/L	3.B
m,p-Xylenes	108-38-3/106-42-3	20.0	<20.0	ug/L	3.B
Methyl Acetate	79-20-9	10.0	<10.0	ug/L	4.K, 3.B
Methyl Butyl Ketone (2-Hexanone)	591-78-6	20.0	<20.0	ug/L	3.B
Methyl Ethyl Ketone (2-Butanone)	78-93-3	20.0	<20.0	ug/L	3.B

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Methylene Chloride	75-09-2	10.0	<10.0	ug/L	3.B
Methyl-tert-Butyl Ether	1634-04-4	10.0	<10.0	ug/L	3.B
Naphthalene	91-20-3	10.0	<10.0	ug/L	3.B
n-Butylbenzene	104-51-8	10.0	<10.0	ug/L	3.B
n-Propylbenzene	103-65-1	10.0	<10.0	ug/L	3.B
o-Xylene	95-47-6	10.0	<10.0	ug/L	3.B
sec-Butylbenzene	135-98-8	10.0	<10.0	ug/L	3.B
Styrene	100-42-5	10.0	<10.0	ug/L	3.B
tert-Butyl alcohol	75-65-0	10.0	<10.0	ug/L	3.B
tert-Butylbenzene	98-06-6	10.0	<10.0	ug/L	3.B
Tetrachloroethene	127-18-4	10.0	<10.0	ug/L	3.B
Toluene	108-88-3	10.0	<10.0	ug/L	3.B
trans-1,2-Dichloroethene	156-60-5	10.0	<10.0	ug/L	3.B
trans-1,3-Dichloropropene	10061-02-6	10.0	<10.0	ug/L	3.B
Trichloroethene	79-01-6	10.0	<10.0	ug/L	3.B
Trichlorofluoromethane	75-69-4	10.0	<10.0	ug/L	3.B
Vinyl Acetate	108-05-4	10.0	<10.0	ug/L	3.B
Vinyl chloride	75-01-4	10.0	<10.0	ug/L	3.B

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
1,2-Dichloroethane-d4	10706-07-0	106	74.4-131	
4-Bromofluorobenzene	460-00-4	103	82.3-134	
Dibromofluoromethane	1868-53-7	104	79.4-122	
Toluene-d8	2037-26-5	106	85-123	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	74	50-200	
1,4-Difluorobenzene	540-36-3	86	50-200	
Chlorobenzene-d5	3114-55-4	82	50-200	
Pentafluorobenzene	363-72-4	88	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 5030 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8260 D

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Semivolatile Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4,5-Trichlorophenol	95-95-4	10.0	31.9	ug/L	
2,4,6-Trichlorophenol	88-06-2	10.0	<10.0	ug/L	
2,4-Dichlorophenol	120-83-2	10.0	<10.0	ug/L	
2,4-Dimethylphenol	105-67-9	10.0	<10.0	ug/L	
2,4-Dinitrophenol	51-28-5	20.0	<20.0	ug/L	
2-Chlorophenol	95-57-8	10.0	<10.0	ug/L	
2-Methylphenol	95-48-7	10.0	<10.0	ug/L	
2-Nitrophenol	88-75-5	10.0	<10.0	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	10.0	13.2	ug/L	
4,6-Dinitro-2-methylphenol	534-52-1	20.0	<20.0	ug/L	
4-Chloro-3-methylphenol	59-50-7	10.0	<10.0	ug/L	
4-Nitrophenol	100-02-7	10.0	27.6	ug/L	
Pentachlorophenol	87-86-5	10.0	<10.0	ug/L	4.K
Phenol	108-95-2	10.0	<10.0	ug/L	4.M

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	105	10.2-125	4.K
2-Fluorophenol	367-12-4	37	16.4-86.6	
Phenol-d6	13127-88-3	25	17.9-85.3	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	71	50-200	
Acenaphthene-d10	15067-26-2	67	50-200	
Chrysene-d12	1719-03-5	131	50-200	
Naphthalene-d8	1146-65-2	72	50-200	
Perylene-d12	1520-96-3	135	50-200	
Phenanthrene-d10	1517-22-2	62	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 625.1

Date Analyzed: 10/27/2020

Analytical Method: EPA 625.1

Parameter	CAS No.	LOQ	Result	Units	Flag
1,2,4-Trichlorobenzene	120-82-1	2.50	<2.50	ug/L	
1,2-Dichlorobenzene	95-50-1	2.50	<2.50	ug/L	
1,3-Dichlorobenzene	541-73-1	2.50	<2.50	ug/L	
1,4-Dichlorobenzene	106-46-7	2.50	<2.50	ug/L	
2,2'-Oxybis(1-Chloropropane)	108-60-1	2.50	<2.50	ug/L	4.J
2,4,5-Trichlorophenol	95-95-4	2.50	31.9	ug/L	
2,4,6-Trichlorophenol	88-06-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
2,4-Dichlorophenol	120-83-2	2.50	<2.50	ug/L	
2,4-Dimethylphenol	105-67-9	2.50	<2.50	ug/L	
2,4-Dinitrophenol	51-28-5	5.00	<5.00	ug/L	
2,4-Dinitrotoluene	121-14-2	2.50	<2.50	ug/L	
2,6-Dinitrotoluene	606-20-2	2.50	4.44	ug/L	
2-Chloronaphthalene	91-58-7	2.50	<2.50	ug/L	
2-Chlorophenol	95-57-8	2.50	<2.50	ug/L	
2-Methylnaphthalene	91-57-6	2.50	<2.50	ug/L	
2-Methylphenol	95-48-7	2.50	<2.50	ug/L	
2-Nitroaniline	88-74-4	2.50	3.10	ug/L	
2-Nitrophenol	88-75-5	2.50	2.69	ug/L	
3,3'-Dichlorobenzidine	91-94-1	2.50	<2.50	ug/L	
3/4-Methylphenol	108-39-4/106-44-5	2.50	13.2	ug/L	
3-Nitroaniline	99-09-2	2.50	<2.50	ug/L	4.J
4,6-Dinitro-2-methylphenol	534-52-1	5.00	<5.00	ug/L	
4-Bromophenyl phenyl ether	101-55-3	2.50	<2.50	ug/L	
4-Chloro-3-methylphenol	59-50-7	2.50	3.65	ug/L	
4-Chloroaniline	106-47-8	2.50	<2.50	ug/L	
4-Chlorophenyl phenyl ether	7005-72-3	2.50	<2.50	ug/L	
4-Nitroaniline	100-01-6	2.50	7.31	ug/L	
4-Nitrophenol	100-02-7	2.50	27.6	ug/L	4.C
Acenaphthene	83-32-9	2.50	<2.50	ug/L	
Acenaphthylene	208-96-8	2.50	<2.50	ug/L	
Aniline	62-53-3	2.50	<2.50	ug/L	
Anthracene	120-12-7	2.50	<2.50	ug/L	
Benzo(a)anthracene	56-55-3	2.50	<2.50	ug/L	
Benzo(a)pyrene	50-32-8	2.50	3.62	ug/L	4.C
Benzo(b)fluoranthene	205-99-2	2.50	2.83	ug/L	4.C
Benzo(g,h,i)perylene	191-24-2	2.50	<2.50	ug/L	

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Benzo(k)fluoranthene	207-08-9	2.50	<2.50	ug/L	
Benzoic Acid	65-85-0	5.00	<5.00	ug/L	4.M, 4.C, 4.K
Benzyl alcohol	100-51-6	2.50	23.7	ug/L	
bis(2-Chloroethoxy)methane	111-91-1	2.50	<2.50	ug/L	
Bis(2-Chloroethyl)ether	111-44-4	2.50	<2.50	ug/L	
Bis(2-Ethylhexyl)phthalate	117-81-7	2.50	16.4	ug/L	4.C
Butyl benzyl phthalate	85-68-7	2.50	3.60	ug/L	4.C
Carbazole	86-74-8	2.50	<2.50	ug/L	
Chrysene	218-01-9	2.50	<2.50	ug/L	
Dibenzo(a,h)anthracene	53-70-3	2.50	<2.50	ug/L	
Dibenzofuran	132-64-9	2.50	<2.50	ug/L	
Diethyl phthalate	84-66-2	2.50	<2.50	ug/L	
Dimethyl phthalate	131-11-3	2.50	<2.50	ug/L	
Di-n-butyl phthalate	84-74-2	2.50	3.65	ug/L	4.C
Di-n-octyl phthalate	117-84-0	2.50	4.13	ug/L	4.C
Fluoranthene	206-44-0	2.50	<2.50	ug/L	
Fluorene	86-73-7	2.50	<2.50	ug/L	
Hexachlorobenzene	118-74-1	2.50	<2.50	ug/L	
Hexachlorobutadiene	87-68-3	2.50	<2.50	ug/L	
Hexachlorocyclopentadiene	77-47-4	2.50	<2.50	ug/L	
Hexachloroethane	67-72-1	2.50	<2.50	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	2.50	<2.50	ug/L	4.C, 4.J
Isophorone	78-59-1	2.50	<2.50	ug/L	
Naphthalene	91-20-3	2.50	<2.50	ug/L	
Nitrobenzene	98-95-3	2.50	<2.50	ug/L	
N-Nitrosodimethylamine	62-75-9	2.50	<2.50	ug/L	
N-Nitroso-di-n-propylamine	621-64-7	2.50	<2.50	ug/L	
N-Nitrosodiphenylamine	86-30-6	2.50	<2.50	ug/L	
Pentachlorophenol	87-86-5	2.50	4.13	ug/L	4.K

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Parameter	CAS No.	LOQ	Result	Units	Flag
Phenanthrene	85-01-8	2.50	<2.50	ug/L	
Phenol	108-95-2	2.50	3.26	ug/L	4.M
Pyrene	129-00-0	2.50	<2.50	ug/L	
Pyridine	110-86-1	5.00	<5.00	ug/L	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
2,4,6-Tribromophenol	118-79-6	105	38.5-145	4.K
2-Fluorobiphenyl	321-60-8	57	40.4-114	
2-Fluorophenol	367-12-4	37	12.7-89.3	
Nitrobenzene-d5	4165-60-0	74	47.3-131	
Phenol-d6	13127-88-3	25	7.73-72.3	
Terphenyl-d14	1718-51-0	92	45.7-139	

Internal Standard	CAS No.	% Recovery	Rec. Limits	Flag
1,4-Dichlorobenzene-d4	3855-82-1	71	50-200	
Acenaphthene-d10	15067-26-2	67	50-200	
Chrysene-d12	1719-03-5	131	50-200	
Naphthalene-d8	1146-65-2	72	50-200	
Perylene-d12	1520-96-3	135	50-200	
Phenanthrene-d10	1517-22-2	62	50-200	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/27/2020

Analytical Method: EPA 8270 E

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Pesticides Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
4,4'-DDD	72-54-8	2.00	<2.00	ug/L	
4,4'-DDE	72-55-9	2.00	<2.00	ug/L	
4,4'-DDT	50-29-3	2.00	<2.00	ug/L	
Aldrin	309-00-2	2.00	<2.00	ug/L	
alpha-BHC	319-84-6	2.00	<2.00	ug/L	
beta-BHC	319-85-7	2.00	<2.00	ug/L	
Chlordane	12789-03-6	2.00	<2.00	ug/L	
cis-Chlordane	5103-71-9	2.00	<2.00	ug/L	
delta-BHC	319-86-8	2.00	<2.00	ug/L	
Dieldrin	60-57-1	2.00	<2.00	ug/L	
Endosulfan I	959-98-8	2.00	<2.00	ug/L	
Endosulfan II	33213-65-9	2.00	<2.00	ug/L	
Endosulfan Sulfate	1031-07-8	2.00	<2.00	ug/L	
Endrin	72-20-8	2.00	<2.00	ug/L	
Endrin Aldehyde	7421-93-4	2.00	<2.00	ug/L	
Endrin Ketone	53494-70-5	2.00	<2.00	ug/L	
gamma-BHC	58-89-9	2.00	<2.00	ug/L	
Heptachlor	76-44-8	2.00	<2.00	ug/L	
Heptachlor Epoxide	1024-57-3	2.00	<2.00	ug/L	
Methoxychlor	72-43-5	2.00	<2.00	ug/L	
Toxaphene	8001-35-2	2.00	<2.00	ug/L	
trans-Chlordane	5103-74-2	2.00	<2.00	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 3510 C

Date Analyzed: 10/28/2020

Analytical Method: EPA 8081 B

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	0.500	<0.500	ug/L	
Aroclor-1221	11104-28-2	0.500	<0.500	ug/L	
Aroclor-1232	11141-16-5	0.500	<0.500	ug/L	
Aroclor-1242	53469-21-9	0.500	<0.500	ug/L	
Aroclor-1248	12672-29-6	0.500	<0.500	ug/L	
Aroclor-1254	11097-69-1	0.500	<0.500	ug/L	
Aroclor-1260	11096-82-5	0.500	<0.500	ug/L	
Aroclor-1262	37324-23-5	0.500	<0.500	ug/L	
Aroclor-1268	11100-14-4	0.500	<0.500	ug/L	

Date Prepared: 10/27/2020

Preparation Method: EPA 608.3

Date Analyzed: 10/28/2020

Analytical Method: EPA 608.3

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Total Metals Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Arsenic	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Barium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Cadmium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Chromium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Copper	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Gold	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.25	<0.25	mg/L	
Lead	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.11	mg/L	
Manganese	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.17	mg/L	
Nickel	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Selenium	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	
Silver	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	<0.05	mg/L	4.C
Zinc	10/27/2020	EPA 200.7, Rev. 4.4(1994)	0.05	0.14	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 200.2

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Mercury	10/28/2020	EPA 245.1, Rev. 3.0(1994)	0.002	<0.002	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA 245.1

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Hexavalent Chromium	10/27/2020	EPA 7196 A	0.100	<0.100	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Prep Metals

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Cyanide	10/27/2020	SM 4500-CN E-2011	0.02	<0.02	mg/L	

Date Prepared: 10/27/2020 Preparation Method: Distillation Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

Ion Chromatography Analysis

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Fluoride	10/27/2020 12:04	EPA 300.0 Rev. 2.1(1993)	0.100	0.152	mg/L	

Date Prepared: 10/27/2020

Preparation Method: IC PW Prep

Client: ICC Commonwealth	Client ID: Brookhaven Labs Upton NY
Date (Time) Collected: 10/26/2020 14:45	Sample ID: BT (Unfiltered)
Date (Time) Received: 10/26/2020 16:55	Laboratory ID: 0102623-03
Matrix: Non-Potable Water	ELAP: #11693

General Chemistry Parameters

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Flashpoint	10/27/2020 16:07	EPA 1010 A	75.0	>140	°F	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Recoverable Petroleum Hydrocarbons	10/27/2020 16:08	EPA 1664 A	5.00	<5.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: EPA1664

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Chlorine Demand	10/27/2020 16:05	SM 18-21 2350 B	2.0	5.2	mg/L	2.B

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Residual Chlorine	10/27/2020 17:24	SM 18-21 4500-Cl G (00)	0.10	<0.10	mg/L	1.C, 3.H

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
pH	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	8.11	units	1.C, 2.B
Temperature @ pH in C	10/27/2020 16:13	SM 18-21 4500-H B (00)	NA	24.00	units	1.C, 2.B

Date Prepared: 10/27/2020 Preparation Method: pH- No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Total Suspended Solids	10/27/2020 16:03	SM 2540 D-2011	12.5	105	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Sulfide	10/27/2020 16:05	SM 4500-S2- F-2011	2.00	<2.00	mg/L	

Date Prepared: 10/27/2020 Preparation Method: No Preparation

Parameter	Date Analyzed	Method	LOQ	Result	Units	Flag
Biochemical Oxygen Demand	10/28/2020 08:55	SM 5210B-2011	4.00	51.8	mg/L	4.N

Date Prepared: 10/28/2020 Preparation Method: No Preparation

Data Qualifiers Key Reference:

1.C	Holding time exceeded, analyze immediate parameter.
2.B	Parameter not certifiable by NELAP.
3.B	Reporting limit raised due to target compound interference.
3.E	Compound reported at a dilution factor.
3.H	Sample has turbidity, but no color change.
4.A	Estimated concentration, exceeds calibration range.
4.C	Target compound found in blank.
4.D	Surrogate recovery has failed low.
4.G	Spike recovery out of range due to matrix interference.
4.I	Dilution Water does not meet QC criteria.
4.J	Continuing Calibration Verification (CCV) quality control levels failed low, values are considered to be estimated.
4.K	Continuing Calibration Verification (CCV) quality control levels failed high, values are considered to be estimated.
4.M	LCS recovery was above QC acceptance limit.
4.N	LCS recovery was below QC acceptance limit.
MDL	Minimum Detection Limit
LOQ	Limit of Quantitation

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS
ICC COMMONWEALTH
55 SOUTH LONG ST
WILLIAMSVILLE, NY 14221

PROJECT LOCATION:
BROOKHAVEN LABS, UPTON, NY

CONTACT: TED LANSBERRY
PHONE: 412-980-7174
EMAIL: TED.LANSBERRY@ICCCOMMONWEALTH.COM

SAMPLER (SIGNATURE)
SAMPLER NAME (PRINT): RICK VIZZA
SAMPLES RECEIVED AT: 1.✓ °C
SAMPLE(S) SEALED: YES / NO
CORRECT CONTAINER(S): YES / NO
0102623

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: SEE ATTACHED	# OF CONTAINERS
1 0102601	WW	G				10.26.20	1440	TOTE #1 (FILTERED)		
2.	WW	G				10.26.20	1441	TOTE #2 (FILTERED)		
3.	WW	G				10.26.20	1445	TOTE #3 (FILTERED)		
4.	WW	G				10.26.20	1447	TOTE #4 (FILTERED)		
5.	WW	G				10.26.20	1450	TOTE #5 (FILTERED)		
6.	WW	G				10.26.20	1451	TOTE #6 (FILTERED)		
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										

Sample Preserved w/HNO3 By: CLIENT ✓
Sample Preserved w/NAOH By: CLIENT ✓
Sample Preserved w/ H2SO4 CLIENT ✓

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_3O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☐ NORMAL ☑ STAT
BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE 10/26/20 TIME 1500	PRINTED NAME RICK VIZZA	RECEIVED BY (SIGNATURE)	DATE 10-26-20 TIME 1515	PRINTED NAME Ben Lamberson
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN	DATE 10-26-20 TIME 1501	PRINTED NAME Ben Lamberson

WHITE - OFFICE / CANARY - CLIENT

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

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Pg _____ of _____

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS
ICC COMMONWEALTH
55. SOUTH LONG ST
WILLIAMSVILLE, NY 14221

PROJECT LOCATION:

CONTACT: TED LANSBERRY
PHONE: 412 · 980 · 7174
EMAIL: TED.LANSBERRY@ICCCOMMONWEALTH.COM

SAMPLER (SIGNATURE)
SAMPLER NAME (PRINT): RICK VIZZA

SAMPLE(S) SEAL YES / NO
CORRECT CONTAINER(S) YES / NO

0102623

SAMPLES RECEIVED AT 1.2°C

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: SEE ATTACHED	# OF CONTAINERS
1. 019630	WW	G				10.26.20	1505	IN 1 (SOURCE)		
2.	WW	G				10.26.20	1508	IN 2 (SOURCE)		
3.	WW	G				10.26.20	1510	IN 3 (SOURCE)		
4.	WW	G				10.26.20	1514	IN 4 (SOURCE)		
5.	WW	G				10.26.20	1517	IN 5 (SOURCE)		
6.	WW	G				10.26.20	1520	IN 6 (SOURCE)		
7.										
8.								Sample Preserved w/HNO3 By: CLIENT		
9.										
10.								Sample Preserved w/ H2SO4 CLIENT		
11.										
12.										
13.								Sample Preserved w/NAOH By: CLIENT		
14.								FLAG IC=PH		

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_3O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☐ NORMAL ☑ STAT
BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE 10.26.20 TIME 1525	PRINTED NAME RICK VIZZA	RECEIVED BY (SIGNATURE)	DATE TIME	PRINTED NAME
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN	DATE 10.2020 TIME 1525	PRINTED NAME BEN LANSBERSON

WHITE - OFFICE / CANARY - CLIENT

NYSDOH ELAP# 11693 USEPA# NY01273 CTDOH# PH-0284 NJDEP# NY012 PADEP# 68-2943

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Pg _____ of _____

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS ICC COMMONWEALTH 55 SOUTH LONG ST. WILLIAMSVILLE, NY 14221	CONTACT: TED LANSBERRY PHONE: 412.980.7174 EMAIL: TED.LANSBERRY@ICCCOMMONWEALTH.COM	SAMPLER (SIGNATURE)	SAMPLE(S) SEALED YES / NO (YES) CORRECT CONTAINER(S) YES / NO (YES)
PROJECT LOCATION:		SAMPLER NAME (PRINT): RICK VIZZA	0102623
		SAMPLES RECEIVED AT: 1-3 °C	

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: SEE ATTACHED	# OF CONTAINERS
1 0102623-01	WW	G				10.26.20	1535	BT 1 (UN-FILTERED)		
2.	WW	G				10.26.20	1539	BT 2 (UN-FILTERED)		
3.	WW	G				10.26.20	1542	BT 3 (UN-FILTERED)		
4.	WW	G				10.26.20	1544	BT 4 (UN-FILTERED)		
5.	WW	G				10.26.20	1547	BT 5 (UNFILTERED)		
6.	WW	G				10.26.20	1550	BT 6 (UN-FILTERED)		
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										

Sample Preserved w/HNO3 By: CLIENT

Sample Preserved w/ H2SO4 CLIENT KI

Sample Preserved w/NAOH By: CLIENT 40

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER

TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON

PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_3O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☐ NORMAL ☑ STAT BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE 10.26.20 TIME 1550	PRINTED NAME: RICK VIZZA	RECEIVED BY (SIGNATURE)	DATE 10.26.20 TIME 1610	PRINTED NAME: BEN LAMBERSON
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN	DATE 10-26-20 TIME 1581	PRINTED NAME: Ben Lamberson

WHITE - OFFICE / CANARY - CLIENT

NYSDOH ELAP# 11693 USEPA# NY01273 CTDOH# PH-0284 NJDEP# NY012 PADEP# 68-2943

Suffolk County Department of Public Works - Division of Sanitation

Industrial Waste Pretreatment Program

SEWER DISCHARGE CONCENTRATION LIMITS

(List as referred to by Suffolk County Code Chapter 740 – "Sewers" - Article V § 740-25)

Maximum Concentration Limits (mg/l) [1]

Parameter	Daily Avg. [2]	Monthly Avg. [3]
Acetone	50.0	50.0
Arsenic	0.4	0.2
Available Chlorine	100.0	50.0
Barium	8.0	4.0
Cadmium	0.8	0.4
Chromium, Hexavalent	0.4	0.2
Chromium, Total	8.0	4.0
Copper	1.6	0.8
Cyanide, Total [4]	3.2	1.6
Cyanide, Amenable [4]	0.8	0.4
Fluorides [5] :		
to Fresh Waters	8.0	4.0
to Saline Waters	72.0	36.0
Gold	0.4	0.2
Lead	0.4	0.2
Manganese	8.0	4.0
Mercury	0.4	0.2
Nickel	8.0	4.0
Phenol	1.5	1.5
Selenium	0.4	0.2
Silver	0.4 **(4.0)** (Photographic wastes only)	0.2 **(3.0)** (Photographic wastes only)
Sulfide	12.0	6.0
Zinc	5.0	2.5
Petroleum Hydrocarbons	50.0	50.0
Total Toxic Organics (TTO) [6]	10.0	10.0

Individual Toxic Organic Compounds [7]

Flashpoint must be greater than 140°F

pH acceptable range - 5.5 Minimum to 12.0 Maximum

Concentration Levels (mg/l)

	Daily	Monthly
BOD_5 [8]	300	300
Chlorine Demand [8]	25	25
Suspended Solids [8]	300	300

Revised May 2015

VOLATILE ORGANIC COMPOUNDS (28)

acrolein
acrylonitrile
benzene
carbon tetrachloride
chlorobenzene
1,1-dichloroethane
1,2-dichloroethane
1,1,1-trichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
chloroethane
2-chloroethylvinyl ether
chloroform
1,1-dichloroethylene
1,2-trans-dichloroethylene
1,2-dichloropropane
1,3-dichloropropane
ethylbenzene
methylene chloride
methyl chloride
methyl bromide
bromoform
dichlorobromomethane
chlorodibromomethane
tetrachloroethylene
toluene
trichloroethylene
vinyl chloride

ACID EXTRACTABLE ORGANIC COMPOUNDS (11)

2,4,6-trichlorophenol
parachloromieta cresol
2-chlorophenol
nitrophenol
pentraclorophenol
2,4-dimethylphenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
2,4-dichlorophenol
phenol

BASE-NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS (46)

acenaphthene
benzidine
1,2,3-trichlorbenzene
hexachlorobenzene
hexachloroethane
bis (2-chloroethyl) ether
2-chloronaphthalene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenythydrazine
fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
bis (2-chloroisopropyl) ether
bis (2-chloroethoxy) methane
hexachlorobutadiene
hexachlorocyclopentadiene
isphoroen
naphthalene
nitrobenzene
n-nitrosodimethylamine
n-nitrosodiphenyamine
n-nitrosodi-n-propylamine
butyl benzyl phthalate
di-n-butyl phthalate
di-n-octyl phthalate
diethyl phthalate
dimethyl phthalate
benzo (a) anthracene
benzo (a) pyrene
3,4-benzofluoranthene
benzo (k) fluoranthene
chrysene
acenaphthylene
anthracene
benzo(ghi)perylene
fluorene
phenanthrene
dibenzo(a,h)anthracene
indeno(1,2,3-cd)pyrene
pyrene
bis(2-ethylhexyl)phthalate

PESTICIDES AND PCB'S (26)

aldrin
dieldrin
chlordane
4,4-DDT
4,4-DDE
4,4-DDD
a-endosulfan
b-endosulfan
endosulfan sulfate
endrin
endrin aldehyde
heptachlor
heptachlor epoxide

a-bhc
B-bhc
q-BHC
w-BHC
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
toxaphene
2,3,7,8 - tetrachlorodibenzo-p-dioxin (TCDD)

Note (1): Whenever State or Federal discharge limits are more stringent than County discharge limits, the appropriate State or Federal limit shall prevail.

Note (2): Daily average concentration value shall be determined by analysis of one (1) or more grab samples obtained within a 24 hour period divided by the number of sample values obtained over that 24 hour period OR a time or flow proportional composite sample obtained over a 24 hour period.

Note (3): Monthly average concentration value shall be calculated as the sum of daily average concentration values recorded over a calendar month, divided by the number of daily average sample values obtained over that calendar month.

Note (4): In accordance with Standard Methods for the Examination of Water and Wastewater latest edition - Method 412B (Total) and 412F (Amenable).

Note (5): These values may be multiplied by a factor of 1.5, if the municipal water supply is not fluoridated.

Note (6): Total Toxic Organics is defined below.

Note (7): Individual Toxic Organic Compounds are specified on page 3.

Note (8): Compatible wastes in excess of the **listed** concentration levels may be acceptable and will be subject to excess strength surcharge billing in all sewer districts, with the exception of **Sewer District 18 – "Hauppauge"** wherein an excess strength surcharge shall apply to BOD_5 levels over 1,000 mg/L, and to Suspended Solids levels over 750 mg/L.; and also with the exception of **Sewer District 7P -"Twelve Pines"** wherein a maximum sewer discharge limit of 250 mg/L applies to BOD_5.

DEFINITIONS:

TOTAL TOXIC ORGANICS (TTO)

1) The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than 0.01 milligrams per liter for the toxic organics listed on pages 3 and 4.

2) Monitoring:

   A) In lieu of monitoring for total toxic organics (TTO), the Administrator may allow industrial users to make the following certification as a comment on any periodic reports required: "Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for TTO I certify that to the best of my knowledge and belief no discharge of toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the Administrator".

   B) Industrial users may be required to submit a solvent management plan that specifies to the Administrator's satisfaction the toxic organic compounds used, the method of disposal used, and the procedures for assuring that toxic organics do not routinely spill or leak into the wastewater discharged to the County sewage works.

Individual compounds in each group shall be limited as follows:

Volatile Organic Compounds:.....2.5 mg/L
Acid Extractable Compounds:.....1.5 mg/L
Base Neutral Extractable Compounds:.....1.5 mg/L
Pesticides and PCB's:.....1.0 mg/L

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-40134-1
Client Project/Site: BNL Wastewater

For:
ICC Commonwealth Corp
55 S Long St
Williamsville, New York 14221

Attn: Ted Lansberry

Authorized for release by:
12/15/2020 11:11:24 AM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-40134-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: ICC Commonwealth Corp

Project: BNL Wastewater

Report Number: 160-40134-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 10/28/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 17.5º C.

Receipt Exceptions

Job ID: 160-40134-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

One or more containers for the following sample was received broken: FWTC-11 (160-40134-6).

One or more containers for the following sample was received empty with the cap off: BTGS (160-40134-3).

The following sample was listed on the Chain of Custody (COC); however, no sample was received: BTTC (160-40134-5).

GROSS ALPHA AND GROSS BETA RADIOACTIVITY

Samples BTGA/GB (160-40134-1) and FW/GA/GB-11 (160-40134-2) were analyzed for Gross Alpha and Gross Beta Radioactivity in accordance with USEPA Method 900.0. The samples were prepared on 11/12/2020 and analyzed on 11/28/2020 and 12/09/2020.

Preparation Batch 160-488958:
The gross alpha and/or gross beta detection goal was not met for the following samples due to a reduction of the sample size attributed to high residual mass. Analytical results are reported with the detection limit achieved: BTGA/GB (160-40134-1) and FW/GA/GB-11 (160-40134-2).

The daily check was outside the criteria on 11/28/20 for detector 23. For both the previous and following days (11/27 and 11/28) the daily check passed for the affected detector; therefore, the results were reported: (590-14121-B-1-A).

The following sample was counted on a detector that inadvertently had the alpha daily check counted under the beta daily check protocol. The detector passed when the correct beta source was counted. Therefore, the lab does not believe this excursion adversely affects the data: FW/GA/GB-11 (160-40134-2).

The gross alpha and/or beta detection goals were not met for the following sample due to a reduction of the sample size attributed to high residual mass. Analytical results are reported with the MDC achieved: BTGA/GB (160-40134-1).

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

CESIUM 137 AND OTHER GAMMA EMITTERS (GS)

Sample FWGS-11 (160-40134-4) was analyzed for Cesium 137 and Other Gamma Emitters (GS) in accordance with USEPA Method 901.1. The samples were prepared on 11/10/2020 and analyzed on 11/19/2020.

Preparation Batch 160-488765:
The detection goal of 20 pCi/L was not met for Cs-137 for the following sample. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton baseline. The laboratory does not believe this adversely affects the data, as the peak was not found by the software and the result is well below the RL: (MB 160-488765/1-A).

For samples FWGS-11 (160-40134-4) and (160-40134-A-4-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108

Job ID: 160-40134-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Ted Lansberry	Site Contact:Rick Vizza	Date:10.27.20	COC No: 1
ICC Commonwealth	Email:ted.lansberry@icccommonwealth.com	Lab Contact:Mike Franks	Carrier:UPS	1 of 1 COCs
55 South Long Street	Tel/Fax: 412.980.7174			Sampler:Rick Vizza
Buffalo, NY 14221	Analysis Turnaround Time			For Lab Use Only:
412-980-7174	☐ CALENDAR DAYS ☑ WORKING DAYS			Walk-in Client:
(xxx) xxx-xxxx FAX	TAT if different from Below ASAP			Lab Sampling:
Brookhaven Labs	☑ 2 weeks			
Upton, NY 11973	☐ 1 week			Job / SDG No.:
PO #1053-107	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	GROSS ALPHA & BETA	GAMMA SPEC	TRITIUM C-14	Sample Specific Notes:
BTGA/GB	10.27.20	1100	G	WSP-W	1			X			ADD HNO3
FW GA/GB- 11	10.27.20	1110	G	WSP-W	1			X			ADD HNO3
BTGS	10.27.20	1103	G	WSP-W	1				X		ADD HNO3
FWGS- 11	10.27.20	1114	G	WSP-W	1				X		ADD HNO3
BTTC	10.27.20	1105	G	WSP-W	1					X	
FWTC- 11	10.27.20	1117	G	WSP-W	1					X	

160-40134 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Please add the HNO3 perservative as required. PLEASE RUSH

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Rick Vizza	Company:	Date/Time:	Received by: UPS	Company:	Date/Time:
Relinquished by: UPS	Company:	Date/Time:	Received by: Michael Cunningham	Company: ETA STL	Date/Time: 10/28/2020 09:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.23, dated 4/16/2019

Login Sample Receipt Checklist

Client: ICC Commonwealth Corp

Job Number: 160-40134-1

Login Number: 40134
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
901.1	Cesium 137 & Other Gamma Emitters (GS)	EPA	TAL SL
Evaporation	Preparation, Evaporation	None	TAL SL
Fill_Geo-0	Fill Geometry, No In-Growth	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

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

Sample Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-40134-1	BTGA/GB	Water	10/27/20 11:00	10/28/20 09:00	
160-40134-2	FW/GA/GB-11	Water	10/27/20 11:10	10/28/20 09:00	
160-40134-4	FWGS-11	Water	10/27/20 11:14	10/28/20 09:00	

Client Sample Results

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Client Sample ID: BTGA/GB

Lab Sample ID: 160-40134-1
Matrix: Water
Date Collected: 10/27/20 11:00
Date Received: 10/28/20 09:00

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	5.68	U G	5.15	5.19	3.00	8.10	pCi/L	11/12/20 12:50	12/09/20 19:36	1
Gross Beta	**49.4**	**G**	5.22	7.18	4.00	4.03	pCi/L	11/12/20 12:50	12/09/20 19:36	1

Client Sample ID: FW/GA/GB-11

Lab Sample ID: 160-40134-2
Matrix: Water
Date Collected: 10/27/20 11:10
Date Received: 10/28/20 09:00

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.180	U G	4.61	4.61	3.00	8.88	pCi/L	11/12/20 12:50	11/28/20 17:04	1
Gross Beta	**48.6**		4.12	6.37	4.00	2.42	pCi/L	11/12/20 12:50	11/28/20 17:04	1

Client Sample ID: FWGS-11

Lab Sample ID: 160-40134-4
Matrix: Water
Date Collected: 10/27/20 11:14
Date Received: 10/28/20 09:00

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Cesium-137	-5.91	U	10.3	10.3	20.0	17.3	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Cobalt-60	**6.96**		4.64	4.71		5.70	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Europium-152	9.55	U	22.3	22.3		32.7	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Europium-154	-0.759	U	12.5	12.5		21.7	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Europium-155	10.5	U	33.8	33.8		56.8	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Sodium-22	**8.59**		5.44	5.53		6.33	pCi/L	11/10/20 14:49	11/19/20 15:11	1
Zinc-65	0.000	U	3.45	3.45		37.4	pCi/L	11/10/20 14:49	11/19/20 15:11	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/L*	*11/10/20 14:49*	*11/19/20 15:11*	*1*

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-488958/1-A
Matrix: Water
Analysis Batch: 490460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488958

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.2861	U	0.595	0.596	3.00	1.25	pCi/L	11/12/20 12:50	11/28/20 16:56	1
Gross Beta	0.7560	U	0.571	0.576	4.00	0.899	pCi/L	11/12/20 12:50	11/28/20 16:56	1

Lab Sample ID: LCS 160-488958/2-A
Matrix: Water
Analysis Batch: 490460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488958

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha			51.5	42.42		6.05	3.00	1.43	pCi/L	82	75 - 125		

Lab Sample ID: LCSB 160-488958/3-A
Matrix: Water
Analysis Batch: 490460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488958

Analyte			Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta			83.2	85.21		9.05	4.00	0.975	pCi/L	102	75 - 125		

Lab Sample ID: 590-14121-B-1-B MS
Matrix: Water
Analysis Batch: 490460

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 488958

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha	4.17		60.8	64.84		9.30	3.00	2.44	pCi/L	100	70 - 130		

Lab Sample ID: 590-14121-B-1-C MSBT
Matrix: Water
Analysis Batch: 490460

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 488958

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta	2.71		98.4	99.23		10.5	4.00	1.09	pCi/L	98	70 - 130		

Lab Sample ID: 590-14121-B-1-D DU
Matrix: Water
Analysis Batch: 490624

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 488958

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Gross Alpha	4.17			2.337			3.00	1.00	pCi/L			0.45	1
Gross Beta	2.71			2.943			4.00	1.00	pCi/L			0.12	1

QC Sample Results

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-488765/1-A
Matrix: Water
Analysis Batch: 489502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488765

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Cesium-137	-1.006	U G	12.6	12.6	20.0	23.1	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Cobalt-60	-1.346	U	20.6	20.6		10.3	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Europium-152	22.63	U	46.2	46.2		34.0	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Europium-154	3.137	U	12.6	12.6		21.7	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Europium-155	-0.6457	U	28.4	28.4		65.1	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Sodium-22	0.0000	U	6.00	6.00		19.7	pCi/L	11/10/20 14:49	11/19/20 10:41	1
Zinc-65	0.0000	U	10.8	10.8		61.5	pCi/L	11/10/20 14:49	11/19/20 10:41	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/L*	*11/10/20 14:49*	*11/19/20 10:41*	*1*

Lab Sample ID: LCS 160-488765/2-A
Matrix: Water
Analysis Batch: 489811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488765

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			136000	145600		17100		415	pCi/L	107	90 - 111		
Cesium-137			43100	44070		5190	20.0	137	pCi/L	102	90 - 111		
Cobalt-60			24300	24750		2920		93.7	pCi/L	102	89 - 110		

Lab Sample ID: 160-40134-4 DU
Matrix: Water
Analysis Batch: 489502

Client Sample ID: FWGS-11
Prep Type: Total/NA
Prep Batch: 488765

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Cesium-137	-5.91	U		-9.287	U G	11.5	20.0	26.2	pCi/L			0.16	1
Cobalt-60	6.96			-1.813	U	25.6		20.2	pCi/L			0.29	1
Europium-152	9.55	U		13.61	U	29.4		41.3	pCi/L			0.08	1
Europium-154	-0.759	U		12.07	U	29.1		26.4	pCi/L			0.31	1
Europium-155	10.5	U		-5.708	U	32.7		72.4	pCi/L			0.24	1
Sodium-22	8.59			4.499	U	10.8		19.7	pCi/L			0.25	1
Zinc-65	0.000	U		-22.34	U	41.1		69.5	pCi/L			0.50	1

Other Detected Radionuclides	*Sample Result*	*Sample Qual*		*DU Result*	*DU Qual*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*			*RER*	*RER Limit*
Other Detected Radionuclide	*None*			*None*					*pCi/L*				

QC Association Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40134-1

Rad

Prep Batch: 488765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40134-4	FWGS-11	Total/NA	Water	Fill_Geo-0	
MB 160-488765/1-A	Method Blank	Total/NA	Water	Fill_Geo-0	
LCS 160-488765/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-0	
160-40134-4 DU	FWGS-11	Total/NA	Water	Fill_Geo-0	

Prep Batch: 488958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40134-1	BTGA/GB	Total/NA	Water	Evaporation	
160-40134-2	FW/GA/GB-11	Total/NA	Water	Evaporation	
MB 160-488958/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-488958/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-488958/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
590-14121-B-1-B MS	Matrix Spike	Total/NA	Water	Evaporation	
590-14121-B-1-C MSBT	Matrix Spike	Total/NA	Water	Evaporation	
590-14121-B-1-D DU	Duplicate	Total/NA	Water	Evaporation	

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-40891-1
Client Project/Site: BNL Wastewater

For:
ICC Commonwealth Corp
55 S Long St
Williamsville, New York 14221

Attn: Ted Lansberry

Authorized for release by:
1/15/2021 10:25:37 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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

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

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Job ID: 160-40891-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: ICC Commonwealth Corp

Project: BNL Wastewater

Report Number: 160-40891-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 12/23/2020 9:02 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 14.5º C.

Receipt Exceptions

Job ID: 160-40891-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The following samples were received with insufficient preservation. The client was contacted, and the laboratory was instructed to adjust the pH and proceed with analysis. 6mL of HNO3 preservative was added by the laboratory, and the sample pHs were adjusted to less than 2 SU: FIRE HYDRANT-1 (160-40891-1), TANK-1102-1 (160-40891-2) and TANK-1102-2 (160-40891-4).

GROSS ALPHA AND GROSS BETA RADIOACTIVITY

Samples FIRE HYDRANT-1 (160-40891-1) and TANK-1102-1 (160-40891-2) were analyzed for Gross Alpha and Gross Beta Radioactivity in accordance with USEPA Method 900.0. The samples were prepared on 12/31/2020 and analyzed on 01/06/2021.

Preparation Batch 160-493663:
The gross alpha and/or beta detection goals were not met for the following samples due to a reduction of the sample size attributed to high residual mass. Analytical results were reported with the MDC achieved: TANK-1102-1 (160-40891-2), (160-40760-I-1-D), (160-40760-I-1-E MS), (160-40760-I-1-G MSBT), (160-40760-I-1-H MSBTD), and (160-40760-I-1-F MSD).

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

CESIUM 137 AND OTHER GAMMA EMITTERS (GS)

Samples FIRE HYDRANT-2 (160-40891-3) and TANK-1102-2 (160-40891-4) were analyzed for Cesium 137 and Other Gamma Emitters (GS) in accordance with USEPA Method 901.1. The samples were prepared on 12/28/2020 and analyzed on 12/30/2020.

Preparation Batch 160-493166:
The detection goal of 20 pCi/L was not met for Cs-137 for the following sample. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton backgrounds. The laboratory does not believe this adversely affects the data. The Cs-137 is well below the RL and MDC: FIRE HYDRANT-2 (160-40891-3) and TANK-1102-2 (160-40891-4).

For samples FIRE HYDRANT-2 (160-40891-3), TANK-1102-2 (160-40891-4) and (160-40891-A-4-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Job ID: 160-40891-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

TRITIUM, TOTAL (LSC)

Samples FIRE HYDRANT-3 (160-40891-5) and TANK-1102-3 (160-40891-6) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 01/11/2021 and analyzed on 01/12/2021.

Preparation Batch 160-494541:
Due to gaseous smells, antifoam was added to the following samples: TANK-1102-3 (160-40891-6).

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

CARBON-14 BY LSC

Samples FIRE HYDRANT-3 (160-40891-5) and TANK-1102-3 (160-40891-6) were analyzed for Carbon-14 by LSC in accordance with EERF. The samples were prepared on 01/06/2021 and analyzed on 01/07/2021.

Preparation Batch 160-494111:
The following samples contained sediment: FIRE HYDRANT-3 (160-40891-5), TANK-1102-3 (160-40891-6), (160-40891-A-5 DU), and (160-40891-A-6 MS). 45 mL of C-14 cocktail was added to the samples because they were suspected to be high in organic matter. Samples 160-40891-6 and 6 MS had a dark black color and were malodorous.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Ted Lansberry	Site Contact: Rick Vizza	Date: 12.21.20	COC No: 3
ICC Commonwealth	Email:ted.lansberry@icc-commonwealth.com	Lab Contact: Mike Franks	Carrier: UPS	1 of 1 COCs
55 South Long Street	Tel/Fax: 412.980.7174			Sampler:Rick Vizza
Buffalo, NY 14221	Analysis Turnaround Time			For Lab Use Only:
412-980-7174	☐ CALENDAR DAYS ☑ WORKING DAYS			Walk-in Client:
(xxx) xxx-xxxx FAX	TAT if different from Below ASAP			Lab Sampling:
Brookhaven Labs	☐ 2 weeks			
Upton, NY	☑ 1 week			Job / SDG No.:
1053-107	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gross Alpha and Beta	Gamma Spec	Tritium and C-14	Sample Specific Notes:
Fire Hydrant-1	12.21.20	1300	G	W	1	N		X			ADD HNO3
Tank-1102-1	12.21.20	1310	G	WSP-W	1	Y		X			ADD HNO3
Fire Hydrant-2	12.21.20	1300	G	W	1				X		ADD HNO3
Tank 1102-2	12.21.20	1310	G	WSP-W	1				X		ADD HNO3
Fire Hydrant-3	12.21.20	1300	G	W	1					X	ADD HNO3
Tank 1102-3	12.21.20	1310	G	WSP-W	1					X	ADD HNO3

160-40891 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Please add the HNO3 perservative as required. PLEASE RUSH

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by: Rick Vizza	Company: ICC Commonwealth	Date/Time:12.21.20	Received by: UPS	Company:	Date/Time:
Relinquished by: UPS	Company:	Date/Time:	Received by: Michaka Jenkins	Company: ETA STL	Date/Time: 12/23/2020 09:02
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.23, dated 4/16/2019

Login Sample Receipt Checklist

Client: ICC Commonwealth Corp

Job Number: 160-40891-1

Login Number: 40891
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40891-1

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40891-1

Method	Method Description	Protocol	Laboratory
900.0	Gross Alpha and Gross Beta Radioactivity	EPA	TAL SL
901.1	Cesium 137 & Other Gamma Emitters (GS)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
Evaporation	Preparation, Evaporation	None	TAL SL
Fill_Geo-0	Fill Geometry, No In-Growth	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

EERF = EERF

EPA = US Environmental Protection Agency

None = None

Laboratory References:

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

Sample Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40891-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-40891-1	FIRE HYDRANT-1	Water	12/21/20 13:00	12/23/20 09:02	
160-40891-2	TANK-1102-1	Water	12/21/20 13:10	12/23/20 09:02	
160-40891-3	FIRE HYDRANT-2	Water	12/21/20 13:00	12/23/20 09:02	
160-40891-4	TANK-1102-2	Water	12/21/20 13:10	12/23/20 09:02	
160-40891-5	FIRE HYDRANT-3	Water	12/21/20 13:00	12/23/20 09:02	
160-40891-6	TANK-1102-3	Water	12/21/20 13:10	12/23/20 09:02	

Client Sample ID: FIRE HYDRANT-1

Lab Sample ID: 160-40891-1
Date Collected: 12/21/20 13:00
Matrix: Water
Date Received: 12/23/20 09:02

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.254	U	0.990	0.990	3.00	2.00	pCi/L	12/31/20 12:13	01/06/21 07:19	1
Gross Beta	0.783	U	0.623	0.628	4.00	0.989	pCi/L	12/31/20 12:13	01/06/21 07:19	1

Client Sample ID: TANK-1102-1

Lab Sample ID: 160-40891-2
Date Collected: 12/21/20 13:10
Matrix: Water
Date Received: 12/23/20 09:02

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	8.61	U G	7.24	7.31	3.00	11.3	pCi/L	12/31/20 12:13	01/06/21 07:19	1
Gross Beta	**83.6**	**G**	6.84	10.8	4.00	4.90	pCi/L	12/31/20 12:13	01/06/21 07:19	1

Client Sample ID: FIRE HYDRANT-2

Lab Sample ID: 160-40891-3
Date Collected: 12/21/20 13:00
Matrix: Water
Date Received: 12/23/20 09:02

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Cesium-137	5.89	U G	12.9	13.0	20.0	22.2	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Cobalt-60	-0.194	U	15.9	15.9		8.98	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Europium-152	28.0	U	21.9	22.2		38.9	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Europium-154	21.8	U	36.9	37.0		24.2	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Europium-155	10.6	U	32.3	32.3		91.6	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Sodium-22	-1.75	U	9.85	9.85		19.0	pCi/L	12/28/20 11:57	12/30/20 09:12	1
Zinc-65	14.7	U	26.5	26.6		45.3	pCi/L	12/28/20 11:57	12/30/20 09:12	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/L*	*12/28/20 11:57*	*12/30/20 09:12*	*1*

Client Sample ID: TANK-1102-2

Lab Sample ID: 160-40891-4
Date Collected: 12/21/20 13:10
Matrix: Water
Date Received: 12/23/20 09:02

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Cesium-137	8.53	U G	13.3	13.3	20.0	22.3	pCi/L	12/28/20 11:57	12/30/20 10:18	1
Cobalt-60	8.33	U	6.65	6.72		8.98	pCi/L	12/28/20 11:57	12/30/20 10:18	1
Europium-152	22.6	U	19.3	19.5		37.8	pCi/L	12/28/20 11:57	12/30/20 10:18	1
Europium-154	5.82	U	6.00	6.04		24.1	pCi/L	12/28/20 11:57	12/30/20 10:18	1
Europium-155	6.04	U	17.4	17.4		88.5	pCi/L	12/28/20 11:57	12/30/20 10:18	1
Sodium-22	**10.5**		7.44	7.55		9.70	pCi/L	12/28/20 11:57	12/30/20 10:18	1

Client Sample ID: TANK-1102-2

Lab Sample ID: 160-40891-4

Date Collected: 12/21/20 13:10

Matrix: Water

Date Received: 12/23/20 09:02

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Zinc-65	5.10	U	25.0	25.0		45.1	pCi/L	12/28/20 11:57	12/30/20 10:18	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/L*	*12/28/20 11:57*	*12/30/20 10:18*	*1*

Client Sample ID: FIRE HYDRANT-3

Lab Sample ID: 160-40891-5

Date Collected: 12/21/20 13:00

Matrix: Water

Date Received: 12/23/20 09:02

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-31.5	U	198	198	500	360	pCi/L	01/11/21 08:31	01/12/21 14:35	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-1.14	U	7.21	7.21	20.0	12.3	pCi/L	01/06/21 16:01	01/07/21 20:23	1

Client Sample ID: TANK-1102-3

Lab Sample ID: 160-40891-6

Date Collected: 12/21/20 13:10

Matrix: Water

Date Received: 12/23/20 09:02

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**2270**		363	415	500	363	pCi/L	01/11/21 08:31	01/12/21 15:43	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	2.22	U	7.26	7.27	20.0	12.1	pCi/L	01/06/21 16:01	01/07/21 22:36	1

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity

Lab Sample ID: MB 160-493663/1-A
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 493663

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.5150	U	0.669	0.671	3.00	1.12	pCi/L	12/31/20 10:48	01/06/21 06:51	1
Gross Beta	-0.1345	U	0.516	0.516	4.00	0.934	pCi/L	12/31/20 10:48	01/06/21 06:51	1

Lab Sample ID: LCS 160-493663/2-A
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 493663

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha			51.5	42.87		6.66	3.00	2.10	pCi/L	83	75 - 125		

Lab Sample ID: LCSB 160-493663/3-A
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 493663

Analyte			Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta			83.0	74.20		7.95	4.00	0.896	pCi/L	89	75 - 125		

Lab Sample ID: 160-40760-I-1-E MS
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 493663

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Alpha	2.82	U G	1290	1269		258	3.00	176	pCi/L	98	70 - 130		

Lab Sample ID: 160-40760-I-1-F MSD
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 493663

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Gross Alpha	2.82	U G	1290	1145		236	3.00	133	pCi/L	88	70 - 130	0.25	1

Lab Sample ID: 160-40760-I-1-G MSBT
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 493663

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Gross Beta	105	G	2320	2047	G	235	4.00	56.8	pCi/L	84	70 - 130		

Method: 900.0 - Gross Alpha and Gross Beta Radioactivity (Continued)

Lab Sample ID: 160-40760-I-1-H MSBTD
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 493663

Analyte	Sample Result	Sample Qual	Spike Added	MSBTD Result	MSBTD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Gross Beta	105	G	2320	2148	G	245	4.00	54.5	pCi/L	88	70 - 130	0.21	1

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-493166/1-A
Matrix: Water
Analysis Batch: 494100

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 493166

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Cesium-137	3.992	U	7.82	7.83	20.0	13.4	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Cobalt-60	4.859	U	13.7	13.7		15.4	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Europium-152	25.81	U	28.9	29.1		30.8	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Europium-154	15.71	U	31.7	31.8		21.7	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Europium-155	-0.00001085	U	48.8	48.8		82.3	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Sodium-22	3.014	U	6.92	6.93		12.5	pCi/L	12/28/20 11:57	01/06/21 07:27	1
Zinc-65	0.0000	U	3.63	3.63		36.3	pCi/L	12/28/20 11:57	01/06/21 07:27	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (2σ+/-)*	*Total Uncert. (2σ+/-)*	*RL*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/L*	*12/28/20 11:57*	*01/06/21 07:27*	*1*

Lab Sample ID: LCS 160-493166/2-A
Matrix: Water
Analysis Batch: 493548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 493166

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			136000	137100		16100		439	pCi/L	101	90 - 111		
Cesium-137			43000	43080		5070	20.0	105	pCi/L	100	90 - 111		
Cobalt-60			23900	24390		2870		54.8	pCi/L	102	89 - 110		

Lab Sample ID: 160-40891-4 DU
Matrix: Water
Analysis Batch: 493374

Client Sample ID: TANK-1102-2
Prep Type: Total/NA
Prep Batch: 493166

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Cesium-137	8.53	U G		23.20		8.33	20.0	5.70	pCi/L			0.68	1
Cobalt-60	8.33	U		-4.945	U	9.43		16.7	pCi/L			0.82	1
Europium-152	22.6	U		3.361	U	14.9		39.3	pCi/L			0.56	1
Europium-154	5.82	U		15.40	U	19.6		21.9	pCi/L			0.37	1
Europium-155	6.04	U		3.881	U	12.7		61.4	pCi/L			0.07	1
Sodium-22	10.5			3.056	U	6.32		11.2	pCi/L			0.54	1
Zinc-65	5.10	U		-14.10	U	24.7		41.5	pCi/L			0.39	1

Method: 901.1 - Cesium 137 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Other Detected Radionuclide	None			None					pCi/L				

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-494541/1-A
Matrix: Water
Analysis Batch: 494920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 494541

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-115.8	U	188	189	500	359	pCi/L	01/11/21 08:31	01/12/21 13:50	1

Lab Sample ID: LCS 160-494541/2-A
Matrix: Water
Analysis Batch: 494920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 494541

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			2370	2284		415	500	363	pCi/L	96	75 - 114		

Lab Sample ID: 160-40891-5 MS
Matrix: Water
Analysis Batch: 494920

Client Sample ID: FIRE HYDRANT-3
Prep Type: Total/NA
Prep Batch: 494541

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-31.5	U	2370	1928		374	500	345	pCi/L	81	67 - 130		

Lab Sample ID: 160-40891-5 DU
Matrix: Water
Analysis Batch: 494920

Client Sample ID: FIRE HYDRANT-3
Prep Type: Total/NA
Prep Batch: 494541

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Tritium	-31.5	U		-54.05	U	191	500	349	pCi/L			0.06	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-494111/1-A
Matrix: Water
Analysis Batch: 494393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 494111

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.8408	U	7.26	7.26	20.0	12.2	pCi/L	01/06/21 16:01	01/07/21 18:11	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-494111/2-A
Matrix: Water
Analysis Batch: 494393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 494111

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			1120	1139		126	20.0	12.2	pCi/L	101	75 - 125		

Lab Sample ID: 160-40891-6 MS
Matrix: Water
Analysis Batch: 494393

Client Sample ID: TANK-1102-3
Prep Type: Total/NA
Prep Batch: 494111

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	2.22	U	1120	1096		121	20.0	11.9	pCi/L	97	37 - 121		

Lab Sample ID: 160-40891-5 DU
Matrix: Water
Analysis Batch: 494393

Client Sample ID: FIRE HYDRANT-3
Prep Type: Total/NA
Prep Batch: 494111

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Carbon-14	-1.14	U		0.1200	U	7.25	20.0	12.3	pCi/L			0.09	1

QC Association Summary

Client: ICC Commonwealth Corp
Project/Site: BNL Wastewater

Job ID: 160-40891-1

Rad

Prep Batch: 493166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40891-3	FIRE HYDRANT-2	Total/NA	Water	Fill_Geo-0	
160-40891-4	TANK-1102-2	Total/NA	Water	Fill_Geo-0	
MB 160-493166/1-A	Method Blank	Total/NA	Water	Fill_Geo-0	
LCS 160-493166/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-0	
160-40891-4 DU	TANK-1102-2	Total/NA	Water	Fill_Geo-0	

Prep Batch: 493663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40891-1	FIRE HYDRANT-1	Total/NA	Water	Evaporation	
160-40891-2	TANK-1102-1	Total/NA	Water	Evaporation	
MB 160-493663/1-A	Method Blank	Total/NA	Water	Evaporation	
LCS 160-493663/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-493663/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
160-40760-I-1-E MS	Matrix Spike	Total/NA	Water	Evaporation	
160-40760-I-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	
160-40760-I-1-G MSBT	Matrix Spike	Total/NA	Water	Evaporation	
160-40760-I-1-H MSBTD	Matrix Spike Duplicate	Total/NA	Water	Evaporation	

Prep Batch: 494111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40891-5	FIRE HYDRANT-3	Total/NA	Water	LSC_Dist_Susp	
160-40891-6	TANK-1102-3	Total/NA	Water	LSC_Dist_Susp	
MB 160-494111/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-494111/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-40891-6 MS	TANK-1102-3	Total/NA	Water	LSC_Dist_Susp	
160-40891-5 DU	FIRE HYDRANT-3	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 494541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-40891-5	FIRE HYDRANT-3	Total/NA	Water	LSC_Dist_Susp	
160-40891-6	TANK-1102-3	Total/NA	Water	LSC_Dist_Susp	
MB 160-494541/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-494541/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-40891-5 MS	FIRE HYDRANT-3	Total/NA	Water	LSC_Dist_Susp	
160-40891-5 DU	FIRE HYDRANT-3	Total/NA	Water	LSC_Dist_Susp	

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ANALYTICAL REPORT

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Laboratory Job ID: 160-41392-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

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

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Job ID: 160-41392-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41392-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 3/5/2021 12:14 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -1.7º C and 1.9º C.

ASBESTOS

Job ID: 160-41392-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Asbesots aliquots were forwarded to RJ Lee for analysis. Refer to the subcontract section of the report for the abestos results and notes.

POLYCHLORINATED BIPHENYLS (PCBS) BY GAS CHROMATOGRAPHY

Sample WC-001-030421 (160-41392-1) was analyzed for Polychlorinated Biphenyls (PCBs) by Gas Chromatography in accordance with EPA SW-846 Method 8082_DOD5. The samples were prepared on 03/10/2021 and analyzed on 03/17/2021.

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

Preparation Batch 280-528680, Analytical Batch 280-529203:
The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: WC-001-030421 (160-41392-1), (280-146124-A-1-A), (280-146124-A-1-B MS) and (280-146124-A-1-C MSD).

The closing continuous calibration verification (CCV) recovered below lower control limits for DCB Decachlorobiphenyl and PCB-1260 on the primary column, and recovered above upper control limits for DCB Decachlorobiphenyl on the confirmation column. The opening CCV recovered within control limits. Results for PCB-1260 from the associated CCV were either non-detect or not reported from this batch: (280-146124-A-1-A), (280-146124-A-1-B MS), and (280-146124-A-1-C MSD).

The following samples were diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) were provided: (280-146124-A-1-A), (280-146124-A-1-B MS), and (280-146124-A-1-C MSD).

Preparation Batch 280-528680, Analytical Batch 280-529378:
The following sample was diluted due to dark color and viscous nature of sample matrix. Elevated reporting limits (RL) were provided: WC-001-030421 (160-41392-1).

The matrix spike / matrix spike duplicate recoveries were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits: (280-146124-A-1-A), (280-146124-A-1-B MS), and (280-146124-A-1-C MSD) .

Surrogate DCB Decachlorobiphenyl recovered outside the lower control limit at at 28% (59%). Surrogate Tetrachloro-m-xylene met acceptance criteria. Evidence of matrix interference was present; therefore, re-extraction and/or re-analysis was not performed: WC-001-030421 (160-41392-1).

The following samples required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information: (280-146124-A-1-B MS) and (280-146124-A-1-C MSD).

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

TCLP METALS (ICP)

Sample WC-001-030421 (160-41392-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Method 1311/6010C_DoD5. The samples were leached on 03/10/2021, prepared on 03/18/2021 and analyzed on 03/20/2021.

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

METALS (ICP/MS)

Sample WC-001-030421 (160-41392-1) was analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 03/18/2021 and analyzed on 03/24/2021.

For ICPMS Metals, a 2X dilution was performed. This is a standard dilution that is performed by TestAmerica St. Louis on all samples analyzed by method SW-846 6020A. The dilution is performed in order to have the matrix of the samples (i.e. the concentration of acids) match the matrix of the standards used for calibration and instrument quality control purposes. The MDL studies analyzed by this method undergo the same 2X dilution, and all detection limits are based on this. Therefore, MDL's and RL's are not affected by the dilution.

Job ID: 160-41392-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Preparation Batch 160-529484, Analytical Batch 160-530314:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrices. The sample consisted of paint chips: WC-001-030421 (160-41392-1), (160-41392-B-1 MS), and (160-41392-B-1 MSD).

Lead was detected in method blank MB 280-529484/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Preparation Batch 160-503393, Analytical Batch 160-503955:
The following samples were diluted due to the nature of the sample matrix. The samples were native rad samples. Elevated reporting limits (RLs) are provided: WC-001-030421 (160-41392-1), (LCS 160-503393/2-A ^10), (MB 160-503393/1-A ^10), and (160-41392-H-1-R DU ^10).

Preparation Batch 160-504270, Analytical Batch 160-504917:
The following samples were diluted due to the sample matrices. The samples were soils which are prone to contain matrix interferences and cause internal standard failure. WC-001-030421 (160-41392-1), (LCS 160-504270/2-A ^10), (MB 160-504270/1-A ^10), (160-41496-D-1-Q ^10), and (160-41496-D-1-S DU ^10).

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

TCLP MERCURY
Sample WC-001-030421 (160-41392-1) was analyzed for TCLP mercury in accordance with SW-846 Method 7470 DoD5. The samples were leached on 03/10/2021, and prepared and analyzed on 03/16/2021.

Preparation Batch 280-528729:
Mercury was detected in method blank LB 280-528729/1-D at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

PERCENT SOLIDS
Sample WC-001-030421 (160-41392-1) was analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 03/23/2021.

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

STRONTIUM-90 (GFPC)
Sample WC-001-030421 (160-41392-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 03/08/2021, prepared on 03/11/2021 and analyzed on 03/23/2021.

Preparation Batches 160-501165 and 160-501579:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrices. The sample contained small rocks: WC-001-030421 (160-41392-1) and (160-41392-H-1-A DU).

Preparation Batch 160-501579:
The sample duplicate precision was outside control limits. Non-homogeneity of the sample matrix was noted during the initial preparation of the samples. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria: WC-001-030421 (160-41392-1), (LCS 160-501579/1-A), (MB 160-501579/4-A), and (160-41392-H-1-C DU).

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

TRITIUM
Sample WC-001-030421 (160-41392-1) was analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 03/23/2021 and analyzed on 03/26/2021.

Job ID: 160-41392-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Preparation Batch 160-502782:
The batch for the following samples were analyzed on Friday 3/26/21, but due to the long count time for each sample the sequence finished just after midnight on Saturday 3/27/21. As no daily check was performed that Saturday, the bracketing CCV for this data is pulled from the daily check on Sunday 3/28/21: WC-001-030421 (160-41392-1), (LCS 160-502782/2-A), (MB 160-502782/1-A), (160-41392-L-1-B MS), (160-41496-F-18-A), and (160-41496-F-18-B DU).

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

ISOTOPIC CURIUM AND/OR AMERICIUM 241 (ALPHA SPECTROMETRY)
Sample WC-001-030421 (160-41392-1) was analyzed for Isotopic Curium and/or Americium 241 (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 03/08/2021, prepared on 03/23/2021 and analyzed on 04/01/2021.

Preparation Batch 160-502810:
The replicate error ratio (RER) was 1.07 and above the upper QC limit (1). Both the sample and duplicate results were below the achieved detection limit and the client requested limit (RL): (160-41392-H-1-F DU).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Sample WC-001-030421 (160-41392-1) was analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 03/08/2021, prepared on 03/23/2021 and analyzed on 04/01/2021.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Sample WC-001-030421 (160-41392-1) was analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 03/08/2021, prepared on 03/23/2021 and analyzed on 04/01/2021.

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

CARBON-14 BY LSC
Sample WC-001-030421 (160-41392-1) was analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared and analyzed on 03/25/2021.

Preparation Batch 160-503166:
The analysis results were based upon the sample matrix as received (i.e. wet weight). The sample contained small rocks: WC-001-030421 (160-41392-1), (160-41392-M-1 DU), and (160-41392-M-1 MS).

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Sample WC-001-030421 (160-41392-1) was analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 03/08/2021, prepared on 03/11/2021 and analyzed on 04/01/2021.

Preparation Batch 160-501596:
The MB MDC/activity ratio for Zn-65 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. Zn-65 was result was below the MDC in the associated sample. The laboratory SOP allows for such statistical exceedances: WC-001-030421 (160-41392-1).

For samples WC-001-030421 (160-41392-1), (LCS 160-501596/2-A), (MB 160-501596/1-A), (160-41405-A-19-B), and (160-41405-A-19-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should

Job ID: 160-41392-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-501605:
The replicate precision for Bi-212 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (280-146030-A-1-B) and (280-146030-A-1-C DU).

For samples (LCS 160-501605/2-A), (MB 160-501605/1-A), (280-146030-A-1-B), and (280-146030-A-1-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231

Job ID: 160-41392-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Sample WC-001-030421 (160-41392-1) was analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 03/08/2021, prepared on 04/02/2021 and analyzed on 04/08/2021.

Preparation Batch 160-504117:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrices. Samples 160-41392-1 and 1 DU contained rocks. Samples 160-41496-1-18 contained detritus: WC-001-030421 (160-41392-1) and (160-41392-H-1-A DU).

The following samples contained sediment after digestion and dissolution. All of the samples, MB, and LCS were filtered through a 0.45 micron filter before column separation: WC-001-030421 (160-41392-1).

The nickel carrier recoveries were below the lower QC limit (40%). The samples exhibited matrix interferences. The sample results met the detection goal; therefore, the lab does not believe this excursion adversely affects the data: WC-001-030421 (160-41392-1) and (160-41496-D-1-O).

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

PROMETHIUM-147

Sample WC-001-030421 (160-41392-1) was analyzed for Promethium-147 in accordance with ST_RC_0047. The samples were prepared on 03/15/2021 and analyzed on 03/31/2021.

Preparation Batch 160-501940:
The analysis results were based upon the sample matrix as received (i.e. wet weight): WC-001-030421 (160-41392-1) and (160-41392-J-1 DU).

The following samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrix. The samples contained small chunks of material that were not uniform size. The samples were filtered through a 0.45 micron filter before they were placed on columns. The samples were still cloudy after filtering: WC-001-030421 (160-41392-1) and (160-41392-J-1 DU).

The MDC for the following sample was above the requested limit (RL) of 1.00 (1.04). This is potentially due to the neodymium carrier recovery, which is low but well within acceptance criteria. The samples were analllyzed using an extended count time in order to minimize any potential bias a lower carrier recovery may have on the results. The sample activity is less than the MDC and RL, indicating that any potential high bias did not affect the results achieved. The detection limit was met for the sample duplicate and replicate precision was demonstrated by acceptable replicate error ratio (RER). Analytical results were reported with the detection limit achieved: WC-001-030421 (160-41392-1).

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

PLUTONIUM 241

Sample WC-001-030421 (160-41392-1) was analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 03/25/2021 and analyzed on 04/03/2021.

Plutonium-241 exceeded the RPD limit for the duplicate of sample WC-001-030421DU (160-41392-1). Refer to the QC report for details.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date:**	_____ of _____ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier:**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Srtack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Alpha Spec - Am-241	Alpha Spec - Pu-238, Pu-239/240	Alpha Spec - U-234, 235, 238	Strontium-90 (GFPC)	Tritium (LSC)	Carbon-14 (LSC)	Nickel-63 (LSC)	Promethium-147 (LSC)	Plutonium-241 (LSC)	Asbestos - EPA 600-R-93	PCBs - EPA 8082A	Lead (ICP/MS) - EPA 6020B	RCRA ICP Metals - EPA 6010C	Mercury - EPA 7470A	Moisture - Percent Moisture	Sample Specific Notes:
WC-001-030421	4-Mar	1300	G	S	13	N	N	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____																		1	1	1	1	1	1	

160-41392 Chain of Custody

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Co-60, Na-22, Zn-65, Eu-152, Eu-154, Eu-155, Ra-226, Bi-214, Ac-228, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Doug Beard	Company: Cabrera Services	Date/Time:3/4/21 /16:30	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: Fed Ex	Company:	Date/Time:	Received by:	Company: ETA-STL	Date/Time: 315121 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-210340.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-41392-1
Address: 4955 Yarrow Street,	Due Date Requested: 4/1/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009155			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A_DOD5/3050B Metals (ICP/MS) - Pb Only	Moisture	8082A_DOD5/3546_PCB_1YR Aroclors + 1262 and 1268	6010C_DOD5/1311T_M (MOD) RCRA ICP Metals	7470A_DOD5/1311T_Hg Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
WC-001-030421 (160-41392-1)	3/4/21	13:00 Eastern		Solid			X	X	X	X	X	5	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 3/8/21 1623	Company: ETA STL	Received by: Date/Time: 3/9/2021 1130 Company: ETA-Dn
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: NA	Cooler Temperature(s) °C and Other Remarks: 3.2 IR9 CF01

Ver: 11/01/2020

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica Denver

Radioactive Package Monitoring and Receipt

(For DOT Compliance)

What radioactive labels are present on or in the package? (Check one)

☐ Shipped as not radioactive per DOT requirements, but from known radiological site/client – Complete Section C
☐ Excepted Pkg, Limited Quantity - Complete Section A
☐ Radioactive White I - Complete Section B
☐ Radioactive Yellow II - Complete Section B
☐ Radioactive Yellow III - Complete Section B

Client/Originator EDA StLaiS Carrier Fedex PD

Document/Shipping Number 4957 0226 4959

Received by/Date/Time 03/09/2021 10:30

Lot Number 160-41392

Section A

A.1 Using the dose rate meter, record the highest dose rate at contact with the surface of the package.

Date/Time of Monitoring 03/09/2021

40 µR/hr

If this measurement exceeds 500 µR/hr for an exempt package, contact the RSO.

A.2 Is package damaged (crushed, dented, wet, punctured, or stained)?

☐ Yes - Complete Section B, starting at B.2 ☐ No - Complete Section C

Section B

B.1 Using the dose rate meter, record the highest dose rate at contact with the surface of the package.

Date/Time of Monitoring _____

_____ µR/hr

If this measurement exceeds;
500 µR/hr for an exempt package; or
500 µR/hr for Radioactive White I; or
50,000 µR/hr for Radioactive Yellow II; or
200,000 µR/hr for Radioactive Yellow III - Contact the RSO (or Designee) immediately.

B.2 Using a single 47mm paper swipe, wipe a 100 cm x 100cm (4in x 4in) area on three sides of the package (total 300cm^2). Using a Model 44-9 alpha-beta-gamma (α-β-γ) probe, determine the background countrate. Then place the detector over the wipe and wait until for a stable reading before recording the wipe countrate.

_____wipe cpm - _____background cpm = _____net α/β/γ cpm

Is the net α-β-γ cpm less than 200 cpm: If yes, go to Section D. Is the net α-β-γ greater than 15,000cpm: If yes, immediately STOP and contact RSO (or Designee).

B.3 Using a Model 43-89 α probe, determine the background countrate. Then place the detector over the wipe and wait for a stable reading before recording the wipe countrate.

_____ wipe cpm - _____ background cpm = _____ net α cpm

_____net α cpm ÷ 0.25 (Eff) = _____net α dpm

Is the net α dpm less than 660 dpm? If no, STOP and contact RSO (or Designee).

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41392-1

Login Number: 41392
List Number: 1
Creator: O'Gara, Mallory L

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41392-1

Login Number: 41392
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 03/09/21 02:41 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41392-1
Project/Site: BNL Decommissioning Project

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium and Neptunium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
ST-RC-0247	Promethium-147 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
1311	TCLP Extraction	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41392-1	WC-001-030421	Solid	03/04/21 13:00	03/05/21 12:14	

Client Sample ID: WC-001-030421

Date Collected: 03/04/21 13:00
Date Received: 03/05/21 12:14

Lab Sample ID: 160-41392-1

Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.077**	**J**	0.50	0.014	mg/L		03/18/21 08:00	03/20/21 07:14	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000079**	**J**	0.0020	0.000030	mg/L		03/16/21 13:15	03/16/21 16:36	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**5.19**		0.467	0.626	3.00	0.331	pCi/g	03/11/21 13:59	03/23/21 16:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*71.2*		*40 - 110*	*03/11/21 13:59*	*03/23/21 16:11*	*1*
Y Carrier	*93.8*		*40 - 110*	*03/11/21 13:59*	*03/23/21 16:11*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0953	U	0.267	0.267	1.00	0.472	pCi/g	03/23/21 08:28	03/26/21 16:51	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.00236	U	0.00462	0.00463	1.00	0.0456	pCi/g	03/23/21 12:46	04/01/21 12:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*86.2*		*30 - 110*	*03/23/21 12:46*	*04/01/21 12:58*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0143	U	0.0230	0.0230	1.00	0.0395	pCi/g	03/23/21 13:42	04/01/21 13:00	1
Plutonium-239/240	**0.0736**		0.0481	0.0485	1.00	0.0245	pCi/g	03/23/21 13:42	04/01/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.4*		*30 - 110*	*03/23/21 13:42*	*04/01/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.0111	U	0.0109	0.0109	1.00	0.0740	pCi/g	03/23/21 13:48	04/01/21 12:50	1
Uranium-238	**0.140**		0.0725	0.0734	1.00	0.0632	pCi/g	03/23/21 13:48	04/01/21 12:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*76.4*		*30 - 110*	*03/23/21 13:48*	*04/01/21 12:50*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Client Sample ID: WC-001-030421

Date Collected: 03/04/21 13:00
Date Received: 03/05/21 12:14

Lab Sample ID: 160-41392-1

Matrix: Solid

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.155	U	0.982	0.982	5.00	1.74	pCi/g	03/25/21 08:43	03/25/21 22:31	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.430**		0.174	0.180		0.133	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Bismuth-214	0.166	U	0.161	0.162		0.624	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Bismuth-212	-0.407	U	1.02	1.02		1.79	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Cesium-137	**6.68**		0.377	0.846		0.146	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Cobalt-60	0.000	U	0.0137	0.0137		0.0513	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Europium-152	0.145	U	0.236	0.236		0.263	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Europium-154	0.0387	U	0.0504	0.0506		0.205	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Europium-155	0.0472	U	0.177	0.177		0.432	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Lead-212	0.0576	U	0.213	0.213		0.366	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Lead-214	0.152	U	0.205	0.206		0.354	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Potassium-40	**5.27**		1.19	1.33		0.518	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Radium-226	0.166	U	0.161	0.162	1.00	0.624	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Sodium-22	-0.0538	U	0.0834	0.0836		0.144	pCi/g	03/11/21 15:06	04/01/21 07:16	1
Zinc-65	-0.00295	U	0.169	0.169		0.335	pCi/g	03/11/21 15:06	04/01/21 07:16	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*03/11/21 15:06*	*04/01/21 07:16*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.833	U	2.68	2.68	5.00	4.61	pCi/g	04/02/21 07:05	04/08/21 10:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*27.9*	*Q*	*40 - 110*	*04/02/21 07:05*	*04/08/21 10:28*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.156	U	1.21	1.21	5.00	2.16	pCi/g	03/25/21 10:52	04/03/21 07:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.4*		*30 - 110*	*03/25/21 10:52*	*04/03/21 07:06*	*1*

Method: ST-RC-0247 - Promethium-147 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Promethium-147	-0.116	U	0.602	0.602	1.00	1.04	pCi/g	03/15/21 15:38	03/31/21 08:47	1

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Client Sample ID: WC-001-030421

Lab Sample ID: 160-41392-1
Date Collected: 03/04/21 13:00
Matrix: Solid
Date Received: 03/05/21 12:14

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nd	*75.2*		*20 - 110*	*03/15/21 15:38*	*03/31/21 08:47*	*1*

Client Sample ID: WC-001-030421

Lab Sample ID: 160-41392-1
Date Collected: 03/04/21 13:00
Matrix: Solid
Date Received: 03/05/21 12:14
Percent Solids: 76.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	79	U M Q D	170	26	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1221	210	U Q D	240	80	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1232	79	U M Q D	170	26	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1242	120	U M Q D	170	47	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1248	39	U M Q D	170	12	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1254	86	U M Q D	170	28	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1260	**380**	**D M Q**	170	6.0	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1262	41	U M Q D	170	14	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2
PCB-1268	17	U M Q D	170	7.0	ug/Kg	☼	03/10/21 13:58	03/17/21 20:05	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*50*	*M D*	*44 - 130*	*03/10/21 13:58*	*03/17/21 20:05*	*2*
DCB Decachlorobiphenyl	*28*	*Q D*	*59 - 130*	*03/10/21 13:58*	*03/17/21 20:05*	*2*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3500000**	**J1 D**	34000	2100	ug/Kg	☼	03/18/21 15:44	03/24/21 19:11	100

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-528680/1-A
Matrix: Solid
Analysis Batch: 529203

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528680

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	31	U	66	10	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1221	80	U	94	31	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1232	31	U	66	10	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1242	48	U	66	18	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1248	15	U	66	4.8	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1254	33	U	66	11	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1260	6.7	U	66	2.3	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1262	16	U	66	5.5	ug/Kg		03/10/21 13:58	03/17/21 02:29	1
PCB-1268	6.7	U	66	2.7	ug/Kg		03/10/21 13:58	03/17/21 02:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*115*		*44 - 130*	*03/10/21 13:58*	*03/17/21 02:29*	*1*
DCB Decachlorobiphenyl	*122*	*M*	*59 - 130*	*03/10/21 13:58*	*03/17/21 02:29*	*1*

Lab Sample ID: LCS 280-528680/8-A
Matrix: Solid
Analysis Batch: 529203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528680

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			133	145		ug/Kg		109	47 - 134		
PCB-1260			133	141		ug/Kg		106	53 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*108*		*44 - 130*
DCB Decachlorobiphenyl	*112*		*59 - 130*

Lab Sample ID: LCSD 280-528680/9-A
Matrix: Solid
Analysis Batch: 529203

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 528680

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			133	137		ug/Kg		103	47 - 134	6	30
PCB-1260			133	137		ug/Kg		103	53 - 140	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*102*		*44 - 130*
DCB Decachlorobiphenyl	*113*		*59 - 130*

Lab Sample ID: 280-146124-A-1-B MS
Matrix: Solid
Analysis Batch: 529378

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 528680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	300	U M Q J1	132	300	U M Q J1	ug/Kg		0	47 - 134		
PCB-1260	2100	D M Q J1	132	1600	D M Q 4	ug/Kg		-395	53 - 140		

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 280-146124-A-1-B MS
Matrix: Solid
Analysis Batch: 529378

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 528680

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	*12*	*Q*	*44 - 130*
DCB Decachlorobiphenyl	*79*		*59 - 130*

Lab Sample ID: 280-146124-A-1-C MSD
Matrix: Solid
Analysis Batch: 529378

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 528680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	300	U M Q J1	133	250	J D Q J1	ug/Kg		188	47 - 134	200	30
PCB-1260	2100	D M Q J1	133	2600	D Q 4 J1	ug/Kg		356	53 - 140	47	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	*50*		*44 - 130*
DCB Decachlorobiphenyl	*139*	*Q*	*59 - 130*

Method: 6010C - Metals (ICP)

Lab Sample ID: LB 280-528729/1-H
Matrix: Solid
Analysis Batch: 529845

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 529408

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.045	U	0.50	0.014	mg/L		03/18/21 08:00	03/20/21 07:07	1

Lab Sample ID: LCS 280-528729/2-H
Matrix: Solid
Analysis Batch: 529845

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 529408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	6.00	6.70		mg/L		112	80 - 120

Lab Sample ID: 160-41392-1 MS
Matrix: Solid
Analysis Batch: 529845

Client Sample ID: WC-001-030421
Prep Type: TCLP
Prep Batch: 529408

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.077	J	6.00	6.03		mg/L		99	80 - 120

Lab Sample ID: 160-41392-1 MSD
Matrix: Solid
Analysis Batch: 529845

Client Sample ID: WC-001-030421
Prep Type: TCLP
Prep Batch: 529408

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.077	J	6.00	6.22		mg/L		102	80 - 120	3	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-529484/1-A
Matrix: Solid
Analysis Batch: 530314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529484

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	58.7	J	300	18	ug/Kg		03/18/21 15:44	03/24/21 19:04	1

Lab Sample ID: LCS 280-529484/2-A
Matrix: Solid
Analysis Batch: 530314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529484

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20000	20200		ug/Kg		101	84 - 118

Lab Sample ID: 160-41392-1 MS
Matrix: Solid
Analysis Batch: 530314

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 529484

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3500000	J1 D	19500	3590000	4 D	ug/Kg	☼	593	84 - 118

Lab Sample ID: 160-41392-1 MSD
Matrix: Solid
Analysis Batch: 530314

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 529484

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3500000	J1 D	19300	5220000	4 D J1	ug/Kg	☼	9056	84 - 118	37	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 280-528729/1-D
Matrix: Solid
Analysis Batch: 529253

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 529083

Analyte	LB Result	LB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000745	J	0.0020	0.000030	mg/L		03/16/21 13:15	03/16/21 16:28	1

Lab Sample ID: LCS 280-528729/2-D
Matrix: Solid
Analysis Batch: 529253

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 529083

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00527		mg/L		105	90 - 116

Lab Sample ID: LCSD 280-528729/3-C
Matrix: Solid
Analysis Batch: 529253

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP
Prep Batch: 529083

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00500	0.00508		mg/L		102	90 - 116	4	10

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 160-41392-1 MS
Matrix: Solid
Analysis Batch: 529253

Client Sample ID: WC-001-030421
Prep Type: TCLP
Prep Batch: 529083

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.000079	J	0.00500	0.00517		mg/L		102	90 - 116		

Lab Sample ID: 160-41392-1 MSD
Matrix: Solid
Analysis Batch: 529253

Client Sample ID: WC-001-030421
Prep Type: TCLP
Prep Batch: 529083

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000079	J	0.00500	0.00533		mg/L		105	90 - 116	3	10

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-501579/4-A
Matrix: Solid
Analysis Batch: 502818

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501579

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.1061	U	0.134	0.134	3.00	0.271	pCi/g	03/11/21 13:59	03/23/21 16:11	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.0*		*40 - 110*	*03/11/21 13:59*	*03/23/21 16:11*	*1*
Y Carrier	*92.7*		*40 - 110*	*03/11/21 13:59*	*03/23/21 16:11*	*1*

Lab Sample ID: LCS 160-501579/1-A
Matrix: Solid
Analysis Batch: 502818

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501579

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.26	7.714		0.806	3.00	0.271	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*84.2*		*40 - 110*
Y Carrier	*89.7*		*40 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 502818

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 501579

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	5.19			2.385		0.351	3.00	0.249	pCi/g			7.67	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*84.6*		*40 - 110*
Y Carrier	*97.2*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-502782/1-A
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502782

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.1327	U	0.244	0.244	1.00	0.468	pCi/g	03/23/21 08:28	03/26/21 16:06	1

Lab Sample ID: LCS 160-502782/2-A
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502782

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.82	6.949		0.878	1.00	0.476	pCi/g	89	80 - 114		

Lab Sample ID: 160-41392-1 MS
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 502782

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.0953	U	7.78	7.273		0.902	1.00	0.470	pCi/g	92	78 - 122		

Lab Sample ID: 160-41496-F-18-B DU
Matrix: Solid
Analysis Batch: 503598

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 502782

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-0.0560	U		-0.1802	U	0.254	1.00	0.496	pCi/g			0.67	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-502816/1-A
Matrix: Solid
Analysis Batch: 504071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502816

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.002886	U	0.0259	0.0259	1.00	0.0821	pCi/g	03/23/21 13:48	04/01/21 12:48	1
Uranium-238	0.02315	U	0.0380	0.0380	1.00	0.0695	pCi/g	03/23/21 13:48	04/01/21 12:48	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.8*		*30 - 110*	*03/23/21 13:48*	*04/01/21 12:48*	*1*

Lab Sample ID: LCS 160-502816/2-A
Matrix: Solid
Analysis Batch: 504072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502816

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-234			6.37	6.000		0.695	1.00	0.113	pCi/g	94	84 - 120		
Uranium-238			6.51	6.021		0.696	1.00	0.0771	pCi/g	92	82 - 122		

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-502816/2-A
Matrix: Solid
Analysis Batch: 504072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502816

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*66.0*		*30 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 504114

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 502816

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-235	-0.0111	U		0.01456	U	0.0350	1.00	0.0728	pCi/g			1.37	3
Uranium-238	0.140			0.07588		0.0544	1.00	0.0663	pCi/g			1.38	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*86.2*		*30 - 110*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-502810/1-A
Matrix: Solid
Analysis Batch: 504044

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502810

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.006608	U	0.0178	0.0178	1.00	0.0426	pCi/g	03/23/21 12:46	04/01/21 12:58	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*81.2*		*30 - 110*	*03/23/21 12:46*	*04/01/21 12:58*	*1*

Lab Sample ID: LCS 160-502810/2-A
Matrix: Solid
Analysis Batch: 504357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502810

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			3.70	3.490		0.501	1.00	0.0244	pCi/g	94	87 - 116		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*86.4*		*30 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 504358

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 502810

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Americium-241	-0.00236	U		-0.03980	U	0.0296	1.00	0.112	pCi/g			2.45	3

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 504358

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 502810

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Americium-243	*70.3*		*30 - 110*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Lab Sample ID: MB 160-502815/1-A
Matrix: Solid
Analysis Batch: 504060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502815

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.01155	U	0.0256	0.0256	1.00	0.0761	pCi/g	03/23/21 13:42	04/01/21 13:00	1
Plutonium-239/240	0.0000	U	0.0239	0.0239	1.00	0.0632	pCi/g	03/23/21 13:42	04/01/21 13:00	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.1*		*30 - 110*	*03/23/21 13:42*	*04/01/21 13:00*	*1*

Lab Sample ID: LCS 160-502815/2-A
Matrix: Solid
Analysis Batch: 504061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502815

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.21	4.862		0.544	1.00	0.0486	pCi/g	93	80 - 125		
Plutonium-239/240			5.28	4.756		0.535	1.00	0.0518	pCi/g	90	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*93.1*		*30 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 504065

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 502815

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0143	U		0.02349	U	0.0294	1.00	0.0413	pCi/g			0.48	3
Plutonium-239/240	0.0736			0.1432		0.0702	1.00	0.0414	pCi/g			1.60	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*81.6*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-503166/1-A
Matrix: Solid
Analysis Batch: 503336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 503166

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.9640	U	0.954	0.960	5.00	1.78	pCi/g	03/25/21 08:43	03/25/21 21:45	1

Lab Sample ID: LCS 160-503166/2-A
Matrix: Solid
Analysis Batch: 503336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 503166

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.45		9.31	5.00	1.78	pCi/g	98	75 - 125		

Lab Sample ID: 160-41392-1 MS
Matrix: Solid
Analysis Batch: 503336

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 503166

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.155	U	80.4	74.66		8.46	5.00	1.70	pCi/g	93	29 - 128		

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 503336

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 503166

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.155	U		-0.1590	U	0.976	5.00	1.73	pCi/g			0.01	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-501596/1-A
Matrix: Solid
Analysis Batch: 503969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501596

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0000	U	0.0246	0.0246		0.165	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Bismuth-214	-0.02005	U	0.0437	0.0437		0.251	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Bismuth-212	0.3444	U	0.951	0.952		1.66	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Cesium-137	0.0000	U	0.00655	0.00655		0.0558	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Cobalt-60	-0.0002291	U	0.0586	0.0586		0.0362	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Europium-152	0.02949	U	0.0767	0.0768		0.113	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Europium-154	0.07269		0.0504	0.0509		0.0639	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Europium-155	-0.005894	U	0.0444	0.0444		0.275	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Lead-212	-0.01690	U	0.0390	0.0390		0.143	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Lead-214	-0.008744	U	0.0288	0.0288		0.134	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Potassium-40	-0.2280	U	0.646	0.646		0.954	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Radium-226	-0.02005	U	0.0437	0.0437	1.00	0.251	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Sodium-22	-0.007901	U	0.0335	0.0335		0.0654	pCi/g	03/11/21 15:06	04/01/21 08:22	1
Zinc-65	0.1768		0.0756	0.0776		0.0621	pCi/g	03/11/21 15:06	04/01/21 08:22	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	03/11/21 15:06	04/01/21 08:22	1

Lab Sample ID: LCS 160-501596/2-A
Matrix: Solid
Analysis Batch: 503968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501596

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.4	97.97		11.3		1.23	pCi/g	102	87 - 116
Cesium-137	26.5	29.13		3.00		0.252	pCi/g	110	87 - 120
Cobalt-60	9.10	9.563		0.996		0.169	pCi/g	105	87 - 115

Lab Sample ID: MB 160-501605/1-A
Matrix: Solid
Analysis Batch: 503967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501605

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	-0.06443	U	0.224	0.225		0.361	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Bismuth-214	-0.04249	U	0.195	0.195		0.369	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Bismuth-212	0.0000	U	0.186	0.186		1.47	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Cesium-137	0.01915	U	0.0639	0.0640		0.117	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Cobalt-60	0.03723	U	0.0888	0.0889		0.107	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Europium-152	0.1467	U	0.109	0.110		0.189	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Europium-154	0.1112	U	0.0629	0.0642		0.142	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Europium-155	0.05610	U	0.131	0.131		0.273	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Lead-212	-0.03397	U	0.105	0.105		0.221	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Lead-214	-0.1233	U	0.196	0.197		0.290	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Potassium-40	0.0000	U	0.158	0.158		0.593	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Radium-226	-0.04249	U	0.195	0.195	1.00	0.369	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Sodium-22	-0.03596	U	0.0770	0.0771		0.138	pCi/g	03/11/21 17:46	04/01/21 10:44	1
Zinc-65	-0.003382	U	0.163	0.163		0.270	pCi/g	03/11/21 17:46	04/01/21 10:44	1

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	03/11/21 17:46	04/01/21 10:44	1

Lab Sample ID: LCS 160-501605/2-A
Matrix: Solid
Analysis Batch: 503968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501605

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.4	97.99		11.3		1.21	pCi/g	102	87 - 116
Cesium-137	26.5	28.51		2.94		0.266	pCi/g	107	87 - 120
Cobalt-60	9.10	9.606		1.00		0.167	pCi/g	106	87 - 115

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 280-146030-A-1-C DU
Matrix: Solid
Analysis Batch: 503967

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 501605

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium-228	1.44		1.905		0.416		0.171	pCi/g	1.84	3
Bismuth-214	0.965		1.001		0.293		0.233	pCi/g	0.20	3
Bismuth-212	0.507	U	2.410		0.879		0.555	pCi/g	3.22	3
Cesium-137	0.0233	U	0.002859	U	0.129		0.234	pCi/g	0.26	3
Cobalt-60	0.0273	U	0.02391	U	0.0966		0.121	pCi/g	0.07	3
Europium-152	0.140	U	-0.001129	U	0.00208		0.404	pCi/g	1.08	3
Europium-154	-0.0182	U	0.02720	U	0.168		0.292	pCi/g	0.52	3
Europium-155	-0.00503	U	-0.1966	U	0.319		1.10	pCi/g	0.64	3
Lead-212	1.27		1.308		0.252		0.204	pCi/g	0.21	3
Lead-214	1.10		1.203		0.288		0.255	pCi/g	0.53	3
Potassium-40	0.969		0.2412	U	1.43		1.66	pCi/g	0.92	3
Radium-226	0.965		1.001		0.293	1.00	0.233	pCi/g	0.20	3
Sodium-22	0.0373	U	0.01155	U	0.0808		0.155	pCi/g	0.59	3
Zinc-65	0.000	U	-0.003800	U	0.261		0.407	pCi/g	0.03	3

Other Detected Radionuclides	*Sample Result*	*Sample Qual*	*DU Result*	*DU Qual*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*DER*	*DER Limit*
Tl-208	*0.475*		*0.4331*		*0.134*		*0.112*	*pCi/g*	*0.49*	*2*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-504117/1-A
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504117

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.2849	U	1.14	1.14	5.00	1.96	pCi/g	04/02/21 07:05	04/08/21 08:16	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*65.4*		*40 - 110*	*04/02/21 07:05*	*04/08/21 08:16*	*1*

Lab Sample ID: LCS 160-504117/2-A
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504117

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-63	21.6	20.49		2.80	5.00	1.96	pCi/g	95	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni Carrier	*65.6*		*40 - 110*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-41496-D-1-P DU
Matrix: Solid
Analysis Batch: 505082

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 504117

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	-0.584	U		-0.08739	U	1.04	5.00	1.83	pCi/g			0.36	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni Carrier	*69.9*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-503182/1-A
Matrix: Solid
Analysis Batch: 504229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 503182

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.1034	U	1.18	1.18	5.00	2.10	pCi/g	03/25/21 10:52	04/03/21 04:54	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.1*		*30 - 110*	*03/25/21 10:52*	*04/03/21 04:54*	*1*

Lab Sample ID: LCS 160-503182/2-A
Matrix: Solid
Analysis Batch: 504229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 503182

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			20.3	17.71		2.43	5.00	2.02	pCi/g	87	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*93.1*		*30 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 504229

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 503182

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.156	U		0.0000	U	1.24	5.00	2.20	pCi/g			0.18	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*81.6*		*30 - 110*

Method: ST-RC-0247 - Promethium-147 (LSC)

Lab Sample ID: MB 160-501940/1-A
Matrix: Solid
Analysis Batch: 503853

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501940

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Promethium-147	-0.02418	U	0.547	0.547	1.00	0.941	pCi/g	03/15/21 15:38	03/31/21 04:24	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nd	*83.8*		*20 - 110*	*03/15/21 15:38*	*03/31/21 04:24*	*1*

Lab Sample ID: LCS 160-501940/2-A
Matrix: Solid
Analysis Batch: 503853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501940

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Promethium-147			101	122.0		13.1	1.00	0.956	pCi/g	121	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Nd	*82.7*		*20 - 110*

Lab Sample ID: 160-41392-1 DU
Matrix: Solid
Analysis Batch: 503853

Client Sample ID: WC-001-030421
Prep Type: Total/NA
Prep Batch: 501940

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Promethium-147	-0.116	U		-0.5032	U	0.571	1.00	1.00	pCi/g			0.92	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Nd	*79.0*		*20 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

GC Semi VOA

Prep Batch: 528680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	3546	
MB 280-528680/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-528680/8-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 280-528680/9-A	Lab Control Sample Dup	Total/NA	Solid	3546	
280-146124-A-1-B MS	Matrix Spike	Total/NA	Solid	3546	
280-146124-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 529203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-528680/1-A	Method Blank	Total/NA	Solid	8082A	528680
LCS 280-528680/8-A	Lab Control Sample	Total/NA	Solid	8082A	528680
LCSD 280-528680/9-A	Lab Control Sample Dup	Total/NA	Solid	8082A	528680

Analysis Batch: 529378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	8082A	528680
280-146124-A-1-B MS	Matrix Spike	Total/NA	Solid	8082A	528680
280-146124-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8082A	528680

Metals

Leach Batch: 528729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	TCLP	Solid	1311	
LB 280-528729/1-D	Method Blank	TCLP	Solid	1311	
LB 280-528729/1-H	Method Blank	TCLP	Solid	1311	
LCS 280-528729/2-D	Lab Control Sample	TCLP	Solid	1311	
LCS 280-528729/2-H	Lab Control Sample	TCLP	Solid	1311	
LCSD 280-528729/3-C	Lab Control Sample Dup	TCLP	Solid	1311	
160-41392-1 MS	WC-001-030421	TCLP	Solid	1311	
160-41392-1 MSD	WC-001-030421	TCLP	Solid	1311	

Prep Batch: 529083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	TCLP	Solid	7470A	528729
LB 280-528729/1-D	Method Blank	TCLP	Solid	7470A	528729
LCS 280-528729/2-D	Lab Control Sample	TCLP	Solid	7470A	528729
LCSD 280-528729/3-C	Lab Control Sample Dup	TCLP	Solid	7470A	528729
160-41392-1 MS	WC-001-030421	TCLP	Solid	7470A	528729
160-41392-1 MSD	WC-001-030421	TCLP	Solid	7470A	528729

Analysis Batch: 529253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	TCLP	Solid	7470A	529083
LB 280-528729/1-D	Method Blank	TCLP	Solid	7470A	529083
LCS 280-528729/2-D	Lab Control Sample	TCLP	Solid	7470A	529083
LCSD 280-528729/3-C	Lab Control Sample Dup	TCLP	Solid	7470A	529083
160-41392-1 MS	WC-001-030421	TCLP	Solid	7470A	529083
160-41392-1 MSD	WC-001-030421	TCLP	Solid	7470A	529083

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Metals

Prep Batch: 529408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	TCLP	Solid	3010A	528729
LB 280-528729/1-H	Method Blank	TCLP	Solid	3010A	528729
LCS 280-528729/2-H	Lab Control Sample	TCLP	Solid	3010A	528729
160-41392-1 MS	WC-001-030421	TCLP	Solid	3010A	528729
160-41392-1 MSD	WC-001-030421	TCLP	Solid	3010A	528729

Prep Batch: 529484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	3050B	
MB 280-529484/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-529484/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-41392-1 MS	WC-001-030421	Total/NA	Solid	3050B	
160-41392-1 MSD	WC-001-030421	Total/NA	Solid	3050B	

Analysis Batch: 529845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	TCLP	Solid	6010C	529408
LB 280-528729/1-H	Method Blank	TCLP	Solid	6010C	529408
LCS 280-528729/2-H	Lab Control Sample	TCLP	Solid	6010C	529408
160-41392-1 MS	WC-001-030421	TCLP	Solid	6010C	529408
160-41392-1 MSD	WC-001-030421	TCLP	Solid	6010C	529408

Analysis Batch: 530314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	6020A	529484
MB 280-529484/1-A	Method Blank	Total/NA	Solid	6020A	529484
LCS 280-529484/2-A	Lab Control Sample	Total/NA	Solid	6020A	529484
160-41392-1 MS	WC-001-030421	Total/NA	Solid	6020A	529484
160-41392-1 MSD	WC-001-030421	Total/NA	Solid	6020A	529484

General Chemistry

Analysis Batch: 530032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Moisture	
280-146562-B-1 DU	Duplicate	Total/NA	Solid	Moisture	

Rad

Leach Batch: 501165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Dry and Grind	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	Dry and Grind	
280-146030-A-1-C DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 501579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	DPS-7	501165
MB 160-501579/4-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-501579/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	DPS-7	501165

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Rad

Prep Batch: 501596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Fill_Geo-21	501165
MB 160-501596/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-501596/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 501605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-501605/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-501605/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
280-146030-A-1-C DU	Duplicate	Total/NA	Solid	Fill_Geo-21	501165

Prep Batch: 501940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Ext_Chrom_LSC	
MB 160-501940/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-501940/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	Ext_Chrom_LSC	

Leach Batch: 502524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41496-D-1-P DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 502782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-502782/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-502782/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-41392-1 MS	WC-001-030421	Total/NA	Solid	LSC_Dist_Susp	
160-41496-F-18-B DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 502810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	ExtChrom	501165
MB 160-502810/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-502810/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	ExtChrom	501165

Prep Batch: 502815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	ExtChrom	501165
MB 160-502815/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-502815/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	ExtChrom	501165

Prep Batch: 502816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	ExtChrom	501165
MB 160-502816/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-502816/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	ExtChrom	501165

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Rad

Prep Batch: 503166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-503166/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-503166/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-41392-1 MS	WC-001-030421	Total/NA	Solid	LSC_Dist_Susp	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 503182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Leach_Precip	
MB 160-503182/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-503182/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-41392-1 DU	WC-001-030421	Total/NA	Solid	Leach_Precip	

Prep Batch: 504117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41392-1	WC-001-030421	Total/NA	Solid	Ext_Chrom_LSC	501165
MB 160-504117/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-504117/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-41496-D-1-P DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	502524

Surrogate Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(44-130)	(59-130)
160-41392-1	WC-001-030421	50 M D	28 Q D
280-146124-A-1-B MS	Matrix Spike	12 Q	79
280-146124-A-1-C MSD	Matrix Spike Duplicate	50	139 Q

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP2
Lab Sample ID	Client Sample ID	(44-130)	(59-130)
LCS 280-528680/8-A	Lab Control Sample	108	112
LCSD 280-528680/9-A	Lab Control Sample Dup	102	113
MB 280-528680/1-A	Method Blank	115	122 M

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41392-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-41392-1	WC-001-030421	71.2	93.8
160-41392-1 DU	WC-001-030421	84.6	97.2
LCS 160-501579/1-A	Lab Control Sample	84.2	89.7
MB 160-501579/4-A	Method Blank	80.0	92.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-41392-1	WC-001-030421	86.2
160-41392-1 DU	WC-001-030421	70.3
LCS 160-502810/2-A	Lab Control Sample	86.4
MB 160-502810/1-A	Method Blank	81.2

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41392-1	WC-001-030421	82.4
160-41392-1 DU	WC-001-030421	81.6
LCS 160-502815/2-A	Lab Control Sample	93.1
MB 160-502815/1-A	Method Blank	87.1

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-41392-1	WC-001-030421	76.4
160-41392-1 DU	WC-001-030421	86.2
LCS 160-502816/2-A	Lab Control Sample	66.0
MB 160-502816/1-A	Method Blank	72.8

Tracer/Carrier Legend

U-232 = Uranium-232

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-41392-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-41392-1	WC-001-030421	27.9 Q
160-41496-D-1-P DU	Duplicate	69.9
LCS 160-504117/2-A	Lab Control Sample	65.6
MB 160-504117/1-A	Method Blank	65.4

Tracer/Carrier Legend

Ni = Ni Carrier

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41392-1	WC-001-030421	82.4
160-41392-1 DU	WC-001-030421	81.6
LCS 160-503182/2-A	Lab Control Sample	93.1
MB 160-503182/1-A	Method Blank	87.1

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: ST-RC-0247 - Promethium-147 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Nd (20-110)
160-41392-1	WC-001-030421	75.2
160-41392-1 DU	WC-001-030421	79.0
LCS 160-501940/2-A	Lab Control Sample	82.7
MB 160-501940/1-A	Method Blank	83.8

Tracer/Carrier Legend

Nd = Nd

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	03/24/2021
Sample Receipt Date	03/09/2021
RJ Lee Group Job No.	AOH1061196-0
Authorization/P.O. No.	
Client Job No./Name	160-41392-1

Analysis: Asbestos in Bulk Samples by Point Count

Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10533763.HPL	WC-001-030421 (160-41392-1)	Yes	1	<0.25 CH		100.00		EAF-03/24/2021

Description: Red/ White/ Grey Debris
Trace chrysotile asbestos detected at less than 1%.
NY ELAP Method 198.1.

Weight Loss: 0.0%

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-41392-1 RJ Lee Group Job No: AOH1061196-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-41401-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
4/14/2021 2:20:28 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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Job ID: 160-41401-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-41401-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 3/5/2021 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -1.7º C and 1.9º C.

TCLP METALS (ICP)

Job ID: 160-41401-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Sample WC-002-030421 (160-41401-1) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Method 1311/6010C_DoD5. The samples were leached on 03/12/2021, prepared on 03/16/2021 and analyzed on 03/17/2021.

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

TOTAL METALS (ICP/MS)
Sample WC-002-030421 (160-41401-1) was analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 03/10/2021 and analyzed on 03/11/2021.

For ICPMS Metals, a 2X dilution was performed. This is a standard dilution that is performed by TestAmerica St. Louis on all samples analyzed by method SW-846 6020A. The dilution is performed in order to have the matrix of the samples (i.e. the concentration of acids) match the matrix of the standards used for calibration and instrument quality control purposes. The MDL studies analyzed by this method undergo the same 2X dilution, and all detection limits are based on this. As such, MDL's and RL's are not affected by the dilution.

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

TCLP MERCURY
Sample WC-002-030421 (160-41401-1) was analyzed for TCLP mercury in accordance with SW-846 Method 7470 DoD5. The samples were leached on 03/12/2021, and prepared and analyzed on 03/17/2021.

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

Preparation Batch 280-529057:
Hg was detected in method blank LB3 280-529057/1-C at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Preparation Batch 280-529419:
Hg failed the recovery criteria low for the MSD of sample 180-118024-1.

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

STRONTIUM-90 (GFPC)
Sample WC-002-030421 (160-41401-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were prepared on 03/22/2021 and analyzed on 03/30/2021.

Preparation Batch 160-502704:
The following sample was prepared at a reduced aliquot due to the sample matrix: A laboratory cont: l sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision. S ample 160-41401-1 had a yellow discoloration and cloudy appearance. Sample 280-146412-1 had a yellow discoloration: WC-002-030421 (160-41401-1).

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

ISOTOPIC CURIUM AND/OR AMERICIUM 241 (ALPHA SPECTROMETRY)
Sample WC-002-030421 (160-41401-1) was analyzed for Isotopic Curium and/or Americium 241 (Alpha Spectrometry) in accordance with A_01R. The samples were prepared on 03/17/2021 and analyzed on 04/01/2021.

Preparation Batch 160-502269:
The following samples were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: WC-002-030421 (160-41401-1) and (160-41401-K-1 DU).

Manual Integrations and adjustments to Regions of Interest (ROI) were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.
(LCS 160-502269/2-A)

Job ID: 160-41401-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The LCS Am-241 spike recovery (123%) i above the upper QC limit (116%) indicating a potential high bias to sample results. However, all sample results were below the achieved detection limit; therefore, the data waas reported: (LCS 160-502269/2-A).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Sample WC-002-030421 (160-41401-1) was analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with USDOE. The samples were prepared on 03/17/2021 and analyzed on 04/01/2021.

Preparation Batch 160-502278:
The following samples were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: WC-002-030421 (160-41401-1) and (160-41401-K-1 DU).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Sample WC-002-030421 (160-41401-1) was analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 03/17/2021 and analyzed on 04/01/2021.

Preparation Batch 160-502280:
The following samples were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: WC-002-030421 (160-41401-1) and (160-41401-K-1 DU).

Preparation Batch 160-502280:
The detection goal for U-234 (1.0 pCi/L) was not met for the following sample and its duplicate (1.07 and 1.44 pCi/L, respectively) due to the reduced sample volume used for preparation. The U-234 results for the sample and DU are below the requested RL and MDC; therefore, the results were reported: WC-002-030421 (160-41401-1) and (160-41401-K-1-F DU)

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

CARBON-14 BY LSC
Sample WC-002-030421 (160-41401-1) was analyzed for Carbon-14 by LSC in accordance with EERF. The samples were prepared and analyzed on 03/11/2021.

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

TRITIUM
Sample WC-002-030421 (160-41401-1) was analyzed for Tritium in accordance with DOE. The samples were prepared on 03/24/2021 and analyzed on 03/25/2021.

Preparation Batch 160-502939:
The following samples were not clear water. The samples have dirt and other particles in them: WC-002-030421 (160-41401-1), (160-41401-E-1 DU), and (160-41401-E-1 MS).

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

RADIUM-226 & OTHER GAMMA EMITTERS (GS)-21 DAY INGROWTH
Sample WC-002-030421 (160-41401-1) was analyzed for Radium-226 & other gamma emitters (GS)-21 day ingrowth in accordance with GA-01-R. The samples were prepared on 03/08/2021 and analyzed on 03/30/2021.

Preparation Batch 160-501172:
For samples WC-002-030421 (160-41401-1), (LCS 160-501172/2-A), (MB 160-501172/1-A), and (160-41401-L-1-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference

Job ID: 160-41401-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Sample WC-002-030421 (160-41401-1) was analyzed for Nickel 59/63 in accordance with LSC-Nickel. The samples were prepared on 03/07/2021 and analyzed on 04/10/2021.

Preparation Batch 160-500931:
The following samples were prepared at a reduced aliquot. The samples had a pale yellow color, sediment, and were malodorous: WC-002-030421 (160-41401-1), and (160-41401-P-1 DU).

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

PROMETHIUM-147

Sample WC-002-030421 (160-41401-1) was analyzed for Promethium-147 in accordance with ST-RC-0247. The samples were prepared on 03/16/2021 and analyzed on 03/25/2021.

Preparation Batch 160-501959:
The following samples were prepared at a reduced aliquot due to heavy sedimentation that made the samples opaque. The samples were filtered before DGA cleanup: WC-002-030421 (160-41401-1) and (160-41401-G-1 DU).

The following samples did not meet the requested limit (RL) due to reduced sample volume, which can be attributed to the presence of matrix interferences (heavy sediment). The method blank (MB) and laboratory control sample (LCS) were also analyzed at the reduced aliquot following NELAC guidance to match the nominal volume of client samples in the preparation batch: WC-002-030421 (160-41401-1), (LCS 160-501959/2-A), (MB 160-501959/1-A), and (160-41401-G-1-B DU).

The detection goal was not met for the following samples due to reduced volume, which can be attributed to the presence of matrix interferences noted during the initial preparation. Analytical results were reported with the detection limit achieved: WC-002-030421 (160-41401-1), (LCS 160-502281/2-A), (MB 160-502281/1-A), and (160-41401-K-1-H DU).

Job ID: 160-41401-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

PLUTONIUM 241

Sample WC-002-030421 (160-41401-1) was analyzed for Plutonium 241 in accordance with LSC-Pu241. The samples were prepared on 03/17/2021 and analyzed on 04/03/2021.

Preparation Batch 160-502281:
The following samples were prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance: WC-002-030421 (160-41401-1) and (160-41401-K-1 DU).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

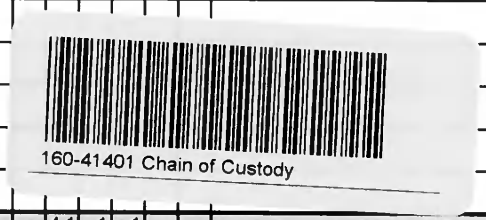
eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date:	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier:	_____ of _____ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: Doug Beard
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Alpha Spec - Am-241	Alpha Spec - Pu-238, Pu-239/240	Alpha Spec - U-234, 235, 238	Strontium-90 (GFPC)	Tritium (LSC)	Carbon-14 (LSC)	Nickel-63 (LSC)	Promethium-147 (LSC)	Plutonium-241 (LSC)			Lead (ICP/MS) - EPA 6020B	RCRA ICP Metals - EPA 6010C	Mercury - EPA 7470A		Sample Specific Notes:
WC-002-030421	4-Mar	1320	C	W	16	N	N	7	7	7	7	7	2	3	3	7	7			2	1	1		
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____								4	4	4	4	4				4	4			4,1	1	1		



Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Co-60, Na-22, Zn-65, Eu-152, Eu-154, Eu-155, Ra-226 (following ingrowth), Bi-214, Ac-228, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Doug Beard	Company: Cabrera Services	Date/Time:3-4-21/16:30	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: Fed Ex	Company:	Date/Time:	Received by:	Company: ETA-STL	Date/Time: 315121 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-210306.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-41401-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 4/1/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009155			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A_DOD5/3020A Metals (ICP/MS) - Pb Only	6010C_DOD5/1311T_M TCLP Lead	7470A_DOD5/1311T_Hg TCLP Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WC-002-030421 (160-41401-1)	3/4/21	13:20 Eastern		Water			X	X	X	4	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Mallory Dan	3/5/21 1730	ETA		03/06/2021 0930	ETA DEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41401-1

Login Number: 41401
List Number: 1
Creator: O'Gara, Mallory L

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-41401-1

Login Number: 41401
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 03/06/21 02:05 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-41401-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium and Neptunium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
H3-04-RC	Tritium (LSC)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
ST-RC-0247	Promethium-147 (LSC)	TAL-STL	TAL SL
1311	TCLP Extraction	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL
PrecSep-7	Preparation, Precipitate Separation (7-Day In-Growth)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
160-41401-1	WC-002-030421	Water	03/04/21 13:20	03/05/21 10:30	

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Client Sample ID: WC-002-030421

Date Collected: 03/04/21 13:20
Date Received: 03/05/21 10:30

Lab Sample ID: 160-41401-1

Matrix: Water

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.045	U	0.50	0.014	mg/L		03/16/21 08:02	03/17/21 06:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**200**		3.0	0.18	ug/L		03/10/21 15:55	03/11/21 20:42	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	0.000080	U	0.0020	0.000030	mg/L		03/17/21 13:00	03/17/21 16:28	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**4.91**		1.03	1.11	3.00	1.14	pCi/L	03/22/21 14:49	03/30/21 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.2*		*40 - 110*	*03/22/21 14:49*	*03/30/21 17:44*	*1*
Y Carrier	*87.5*		*40 - 110*	*03/22/21 14:49*	*03/30/21 17:44*	*1*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.121	U J	0.360	0.360	1.00	0.764	pCi/L	03/17/21 15:08	04/01/21 12:57	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*72.8*		*30 - 110*	*03/17/21 15:08*	*04/01/21 12:57*	*1*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.124	U	0.305	0.305	1.00	0.623	pCi/L	03/17/21 15:25	04/01/21 12:59	1
Plutonium-239/240	-0.0415	U	0.269	0.269	1.00	0.732	pCi/L	03/17/21 15:25	04/01/21 12:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.4*		*30 - 110*	*03/17/21 15:25*	*04/01/21 12:59*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	0.219	U	0.556	0.556	1.00	1.07	pCi/L	03/17/21 15:30	04/01/21 12:51	1
Uranium-235	-0.151	U	0.135	0.136	1.00	0.860	pCi/L	03/17/21 15:30	04/01/21 12:51	1
Uranium-238	**0.872**		0.621	0.625	1.00	0.647	pCi/L	03/17/21 15:30	04/01/21 12:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.4*		*30 - 110*	*03/17/21 15:30*	*04/01/21 12:51*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Client Sample ID: WC-002-030421

Date Collected: 03/04/21 13:20
Date Received: 03/05/21 10:30

Lab Sample ID: 160-41401-1

Matrix: Water

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	4.26	U	7.39	7.41	20.0	12.3	pCi/L	03/11/21 07:28	03/11/21 19:26	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	7.04	U	20.3	20.3		33.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Bismuth-212	-18.0	U	89.4	89.5		155	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Bismuth-214	**19.9**		16.8	16.9		17.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Cesium-137	-3.23	U	7.11	7.12		12.0	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Cobalt-60	3.31	U	4.89	4.90		7.12	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Europium-152	15.2	U	11.4	11.6		23.3	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Europium-154	3.24	U	5.22	5.24		15.8	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Europium-155	-8.90	U	32.8	32.9		54.8	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Lead-212	-4.62	U	9.72	9.73		16.4	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Lead-214	-10.8	U	14.1	14.2		24.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Potassium-40	57.3	U	96.5	96.7		98.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Radium-226	**19.9**		16.8	16.9	50.0	17.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Radium-228	7.04	U	20.3	20.3	50.0	33.5	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Sodium-22	2.01	U	4.49	4.50		7.91	pCi/L	03/08/21 20:23	03/30/21 17:01	1
Zinc-65	0.000	U	5.18	5.18		23.3	pCi/L	03/08/21 20:23	03/30/21 17:01	1

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**2370**		365	420	500	359	pCi/L	03/24/21 08:14	03/25/21 13:17	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.000	U	1.48	1.48	5.00	2.34	pCi/L	03/07/21 10:00	04/10/21 05:12	1
Nickel-63	1.47	U	1.68	1.69	5.00	2.76	pCi/L	03/07/21 10:00	04/10/21 05:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*79.8*		*40 - 110*	*03/07/21 10:00*	*04/10/21 05:12*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	6.90	U	11.9	11.9	5.00	19.7	pCi/L	03/17/21 15:33	04/03/21 12:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.4*		*30 - 110*	*03/17/21 15:33*	*04/03/21 12:38*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Client Sample ID: WC-002-030421

Date Collected: 03/04/21 13:20
Date Received: 03/05/21 10:30

Lab Sample ID: 160-41401-1

Matrix: Water

Method: ST-RC-0247 - Promethium-147 (LSC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Promethium-147	2.43	U	3.28	3.29	2.00	5.41	pCi/L	03/16/21 09:03	03/25/21 10:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nd	*82.4*		*20 - 110*	*03/16/21 09:03*	*03/25/21 10:32*	*1*

Method: 6010C - Metals (ICP)

Lab Sample ID: LB3 280-529057/1-B
Matrix: Water
Analysis Batch: 529355

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 529080

Analyte	LB3 Result	LB3 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.045	U	0.50	0.014	mg/L		03/16/21 08:02	03/17/21 05:49	1

Lab Sample ID: LCS 280-529057/2-B
Matrix: Water
Analysis Batch: 529355

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 529080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	6.00	5.99		mg/L		100	80 - 120

Lab Sample ID: 180-118024-A-1-C MS
Matrix: Water
Analysis Batch: 529355

Client Sample ID: Matrix Spike
Prep Type: TCLP
Prep Batch: 529080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.045	U	6.00	5.85		mg/L		98	80 - 120

Lab Sample ID: 180-118024-A-1-D MSD
Matrix: Water
Analysis Batch: 529355

Client Sample ID: Matrix Spike Duplicate
Prep Type: TCLP
Prep Batch: 529080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.045	U	6.00	5.82		mg/L		97	80 - 120	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-528410/1-A
Matrix: Water
Analysis Batch: 528958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528410

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		03/10/21 15:55	03/11/21 20:35	1

Lab Sample ID: LCS 280-528410/2-A
Matrix: Water
Analysis Batch: 528958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	40.1		ug/L		100	88 - 115

Lab Sample ID: 160-41401-1 MS
Matrix: Water
Analysis Batch: 528958

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 528410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	200		40.0	241	4	ug/L		98	88 - 115

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 160-41401-1 MSD — **Client Sample ID: WC-002-030421**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 528958 — **Prep Batch: 528410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	200		40.0	239	4	ug/L		92	88 - 115	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB3 280-529057/1-C — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 529419 — **Prep Batch: 529084**

Analyte	LB3 Result	LB3 Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	0.0000810	J	0.0020	0.000030	mg/L		03/17/21 13:00	03/17/21 15:57	1

Lab Sample ID: LCS 280-529057/2-C — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 529419 — **Prep Batch: 529084**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	0.00500	0.00499		mg/L		100	90 - 116

Lab Sample ID: 180-118024-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 529419 — **Prep Batch: 529084**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	0.000077	J1	0.00500	0.00469		mg/L		92	90 - 116

Lab Sample ID: 180-118024-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: TCLP**
Analysis Batch: 529419 — **Prep Batch: 529084**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	0.000077	J1	0.00500	0.00452	J1	mg/L		89	90 - 116	4	10

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-502704/7-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 503705 — **Prep Batch: 502704**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.04967	U	0.152	0.152	3.00	0.265	pCi/L	03/22/21 14:49	03/30/21 17:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*87.7*		*40 - 110*	*03/22/21 14:49*	*03/30/21 17:45*	*1*
Y Carrier	*91.6*		*40 - 110*	*03/22/21 14:49*	*03/30/21 17:45*	*1*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: LCS 160-502704/1-A
Matrix: Water
Analysis Batch: 503705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502704

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			8.26	7.420		0.805	3.00	0.302	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.6*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

Lab Sample ID: LCSD 160-502704/2-A
Matrix: Water
Analysis Batch: 503705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 502704

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Strontium-90			8.26	8.356		0.878	3.00	0.308	pCi/L	101	75 - 125	0.56	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Sr Carrier	*88.7*		*40 - 110*
Y Carrier	*88.6*		*40 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-502280/1-A
Matrix: Water
Analysis Batch: 504037

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502280

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	-0.1687	U	0.330	0.331	1.00	0.976	pCi/L	03/17/21 15:30	04/01/21 12:51	1
Uranium-235	0.05998	U	0.254	0.255	1.00	0.672	pCi/L	03/17/21 15:30	04/01/21 12:51	1
Uranium-238	0.02405	U	0.210	0.210	1.00	0.595	pCi/L	03/17/21 15:30	04/01/21 12:51	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.1*		*30 - 110*	*03/17/21 15:30*	*04/01/21 12:51*	*1*

Lab Sample ID: LCS 160-502280/2-A
Matrix: Water
Analysis Batch: 504076

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502280

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-234			63.7	61.91		7.30	1.00	1.18	pCi/L	97	75 - 125		
Uranium-238			65.1	62.68		7.36	1.00	0.787	pCi/L	96	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*71.2*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 504039

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502280

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Uranium-234	0.219	U		-0.3106	U	0.520	1.00	1.44	pCi/L			0.49	1
Uranium-235	-0.151	U		0.6956	U	0.702	1.00	0.866	pCi/L			1.01	1
Uranium-238	0.872			0.4649	U	0.573	1.00	0.882	pCi/L			0.34	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*60.3*		*30 - 110*

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-502269/1-A
Matrix: Water
Analysis Batch: 504040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502269

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.2023	U	0.222	0.223	1.00	0.800	pCi/L	03/17/21 15:08	04/01/21 12:57	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*103*		*30 - 110*	*03/17/21 15:08*	*04/01/21 12:57*	*1*

Lab Sample ID: LCS 160-502269/2-A
Matrix: Water
Analysis Batch: 504041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502269

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			37.0	45.71	J	6.43	1.00	0.883	pCi/L	123	80 - 116		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*92.5*		*30 - 110*

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 504043

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502269

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Americium-241	0.121	U J		0.2651	U J	0.422	1.00	0.729	pCi/L			0.18	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Americium-243	*58.3*		*30 - 110*

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Lab Sample ID: MB 160-502278/1-A
Matrix: Water
Analysis Batch: 504049

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502278

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.4191	U	0.394	0.396	1.00	0.518	pCi/L	03/17/21 15:25	04/01/21 12:59	1
Plutonium-239/240	0.3466	U	0.328	0.330	1.00	0.353	pCi/L	03/17/21 15:25	04/01/21 12:59	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*03/17/21 15:25*	*04/01/21 12:59*	*1*

Lab Sample ID: LCS 160-502278/2-A
Matrix: Water
Analysis Batch: 504050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502278

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	52.1	50.70		5.84	1.00	0.440	pCi/L	97	79 - 115
Plutonium-239/240	52.8	51.23		5.89	1.00	0.440	pCi/L	97	85 - 120

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*98.4*		*30 - 110*

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 504057

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502278

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	RER	RER Limit
Plutonium-238	0.124	U	-0.08120	U	0.260	1.00	0.852	pCi/L	0.36	1
Plutonium-239/240	-0.0415	U	0.3251	U	0.509	1.00	0.889	pCi/L	0.47	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*77.2*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-501551/1-A
Matrix: Water
Analysis Batch: 501626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501551

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.1201	U	7.31	7.31	20.0	12.4	pCi/L	03/11/21 07:28	03/11/21 17:14	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-501551/2-A
Matrix: Water
Analysis Batch: 501626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501551

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			1120	1037		115	20.0	12.3	pCi/L	92	75 - 125		

Lab Sample ID: 160-41401-1 MS
Matrix: Water
Analysis Batch: 501626

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 501551

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	4.26	U	1120	1018		113	20.0	12.4	pCi/L	90	37 - 121		

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 501626

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 501551

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Carbon-14	4.26	U		-5.032	U	7.08	20.0	12.3	pCi/L			0.64	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-501172/1-A
Matrix: Water
Analysis Batch: 503666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501172

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	18.73	U	35.2	35.3		44.1	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Bismuth-212	69.92	U	144	145		243	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Bismuth-214	-7.665	U	28.6	28.6		48.4	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Cesium-137	-5.885	U	16.1	16.1		17.5	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Cobalt-60	0.9336	U	10.5	10.5		12.6	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Europium-152	7.159	U	8.87	8.91		24.4	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Europium-154	17.93		21.5	21.6		15.6	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Europium-155	2.928	U	10.9	10.9		41.4	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Lead-212	-4.341	U	14.9	14.9		25.3	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Lead-214	-7.956	U	18.4	18.4		31.4	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Potassium-40	37.88	U	70.3	70.4		111	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Radium-226	-7.665	U	28.6	28.6	50.0	48.4	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Radium-228	18.73	U	35.2	35.3	50.0	44.1	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Sodium-22	-8.998	U	10.8	10.9		17.7	pCi/L	03/08/21 20:23	03/30/21 16:59	1
Zinc-65	-8.446	U	26.4	26.4		45.3	pCi/L	03/08/21 20:23	03/30/21 16:59	1

Lab Sample ID: LCS 160-501172/2-A
Matrix: Water
Analysis Batch: 503825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501172

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			136000	137700		16200		468	pCi/L	102	86 - 111		

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-501172/2-A
Matrix: Water
Analysis Batch: 503825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501172

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Cesium-137	42800	43380		5110		139	pCi/L	101	90 - 110
Cobalt-60	23100	23490		2770		109	pCi/L	101	89 - 110

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 503666

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 501172

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	RER	RER Limit
Actinium-228	7.04	U	17.68	U	32.0		37.4	pCi/L	0.20	1
Bismuth-212	-18.0	U	-72.00	U	178		212	pCi/L	0.20	1
Bismuth-214	19.9		4.214	U	2.91		61.1	pCi/L	0.79	1
Cesium-137	-3.23	U	-4.736	U	14.3		16.6	pCi/L	0.07	1
Cobalt-60	3.31	U	-1.302	U	12.0		13.9	pCi/L	0.27	1
Europium-152	15.2	U	15.77	U	23.3		21.2	pCi/L	0.02	1
Europium-154	3.24	U	9.949		8.72		7.51	pCi/L	0.48	1
Europium-155	-8.90	U	5.563	U	26.0		43.7	pCi/L	0.25	1
Lead-212	-4.62	U	4.986	U	10.1		16.0	pCi/L	0.48	1
Lead-214	-10.8	U	17.88	U	13.9		18.3	pCi/L	1.02	1
Potassium-40	57.3	U	97.28	U	81.6		111	pCi/L	0.22	1
Radium-226	19.9		4.214	U	2.91	50.0	61.1	pCi/L	0.79	1
Radium-228	7.04	U	17.68	U	32.0	50.0	37.4	pCi/L	0.20	1
Sodium-22	2.01	U	1.255	U	5.02		9.44	pCi/L	0.08	1
Zinc-65	0.000	U	-8.579	U	28.8		49.3	pCi/L	0.25	1

Method: H3-04-RC - Tritium (LSC)

Lab Sample ID: MB 160-502939/1-A
Matrix: Water
Analysis Batch: 503215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502939

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-141.9	U	184	185	500	357	pCi/L	03/24/21 08:14	03/25/21 12:32	1

Lab Sample ID: LCS 160-502939/2-A
Matrix: Water
Analysis Batch: 503215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502939

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	2350	2302		413	500	357	pCi/L	98	75 - 114

Method: H3-04-RC - Tritium (LSC) (Continued)

Lab Sample ID: 160-41401-1 MS
Matrix: Water
Analysis Batch: 503215

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502939

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	2370		2340	5311		685	500	360	pCi/L	126	67 - 130

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 503215

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502939

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	RER	RER Limit
Tritium	2370		2266		402	500	344	pCi/L	0.13	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-500931/1-A
Matrix: Water
Analysis Batch: 505253

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500931

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-59	0.0000	U	1.30	1.30	5.00	2.13	pCi/L	03/07/21 10:00	04/09/21 20:27	1
Nickel-63	2.049	U	1.54	1.55	5.00	2.49	pCi/L	03/07/21 10:00	04/09/21 20:27	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni Carrier	*88.3*		*40 - 110*	*03/07/21 10:00*	*04/09/21 20:27*	*1*

Lab Sample ID: LCS 160-500931/2-A
Matrix: Water
Analysis Batch: 505253

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500931

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-59	84.2	73.68		10.2	5.00	1.93	pCi/L	88	75 - 125
Nickel-63	77.8	69.77		7.69	5.00	2.19	pCi/L	90	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni Carrier	*101*		*40 - 110*

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 505253

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 500931

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	RER	RER Limit
Nickel-59	0.000	U	0.0000	U	1.51	5.00	2.49	pCi/L	0	1
Nickel-63	1.47	U	1.139	U	1.64	5.00	2.70	pCi/L	0.1	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni Carrier	*81.6*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-502281/1-A
Matrix: Water
Analysis Batch: 504230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 502281

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	6.244	U	9.99	10.0	5.00	16.5	pCi/L	03/17/21 15:33	04/03/21 10:25	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*03/17/21 15:33*	*04/03/21 10:25*	*1*

Lab Sample ID: LCS 160-502281/2-A
Matrix: Water
Analysis Batch: 504230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 502281

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			203	172.6		23.4	5.00	17.2	pCi/L	85	77 - 115		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*98.4*		*30 - 110*

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 504230

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 502281

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Plutonium-241	6.90	U		5.869	U	13.1	5.00	22.0	pCi/L			0.04	1

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*77.2*		*30 - 110*

Method: ST-RC-0247 - Promethium-147 (LSC)

Lab Sample ID: MB 160-501959/1-A
Matrix: Water
Analysis Batch: 503213

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501959

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Promethium-147	0.2559	U	2.77	2.77	2.00	4.69	pCi/L	03/16/21 09:03	03/25/21 08:20	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nd	*95.0*		*20 - 110*	*03/16/21 09:03*	*03/25/21 08:20*	*1*

Lab Sample ID: LCS 160-501959/2-A
Matrix: Water
Analysis Batch: 503213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501959

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Promethium-147			406	378.8		42.0	2.00	5.17	pCi/L	93	75 - 125		

Method: ST-RC-0247 - Promethium-147 (LSC) (Continued)

Carrier	LCS %Yield	LCS Qualifier	Limits
Nd	85.8		20 - 110

Lab Sample ID: 160-41401-1 DU
Matrix: Water
Analysis Batch: 503213

Client Sample ID: WC-002-030421
Prep Type: Total/NA
Prep Batch: 501959

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	LOQ	MDC	Unit			RER	RER Limit
Promethium-147	2.43	U		0.6259	U	3.06	2.00	5.16	pCi/L			0.28	1

Carrier	DU %Yield	DU Qualifier	Limits
Nd	86.4		20 - 110

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Metals

Prep Batch: 528410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	3020A	
MB 280-528410/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-528410/2-A	Lab Control Sample	Total/NA	Water	3020A	
160-41401-1 MS	WC-002-030421	Total/NA	Water	3020A	
160-41401-1 MSD	WC-002-030421	Total/NA	Water	3020A	

Analysis Batch: 528958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	6020A	528410
MB 280-528410/1-A	Method Blank	Total/NA	Water	6020A	528410
LCS 280-528410/2-A	Lab Control Sample	Total/NA	Water	6020A	528410
160-41401-1 MS	WC-002-030421	Total/NA	Water	6020A	528410
160-41401-1 MSD	WC-002-030421	Total/NA	Water	6020A	528410

Leach Batch: 529057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	TCLP	Water	1311	
LB3 280-529057/1-B	Method Blank	TCLP	Water	1311	
LB3 280-529057/1-C	Method Blank	TCLP	Water	1311	
LCS 280-529057/2-B	Lab Control Sample	TCLP	Water	1311	
LCS 280-529057/2-C	Lab Control Sample	TCLP	Water	1311	
180-118024-A-1-C MS	Matrix Spike	TCLP	Water	1311	
180-118024-A-1-D MSD	Matrix Spike Duplicate	TCLP	Water	1311	
180-118024-A-1-E MS	Matrix Spike	TCLP	Water	1311	
180-118024-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	1311	

Prep Batch: 529080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	TCLP	Water	3010A	529057
LB3 280-529057/1-B	Method Blank	TCLP	Water	3010A	529057
LCS 280-529057/2-B	Lab Control Sample	TCLP	Water	3010A	529057
180-118024-A-1-C MS	Matrix Spike	TCLP	Water	3010A	529057
180-118024-A-1-D MSD	Matrix Spike Duplicate	TCLP	Water	3010A	529057

Prep Batch: 529084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	TCLP	Water	7470A	529057
LB3 280-529057/1-C	Method Blank	TCLP	Water	7470A	529057
LCS 280-529057/2-C	Lab Control Sample	TCLP	Water	7470A	529057
180-118024-A-1-E MS	Matrix Spike	TCLP	Water	7470A	529057
180-118024-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	7470A	529057

Analysis Batch: 529355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	TCLP	Water	6010C	529080
LB3 280-529057/1-B	Method Blank	TCLP	Water	6010C	529080
LCS 280-529057/2-B	Lab Control Sample	TCLP	Water	6010C	529080
180-118024-A-1-C MS	Matrix Spike	TCLP	Water	6010C	529080
180-118024-A-1-D MSD	Matrix Spike Duplicate	TCLP	Water	6010C	529080

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-41401-1
Project/Site: BNL Decommissioning Project

Metals

Analysis Batch: 529419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	TCLP	Water	7470A	529084
LB3 280-529057/1-C	Method Blank	TCLP	Water	7470A	529084
LCS 280-529057/2-C	Lab Control Sample	TCLP	Water	7470A	529084
180-118024-A-1-E MS	Matrix Spike	TCLP	Water	7470A	529084
180-118024-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	7470A	529084

Rad

Prep Batch: 500931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	Ext_Chrom_LSC	
MB 160-500931/1-A	Method Blank	Total/NA	Water	Ext_Chrom_LSC	
LCS 160-500931/2-A	Lab Control Sample	Total/NA	Water	Ext_Chrom_LSC	
160-41401-1 DU	WC-002-030421	Total/NA	Water	Ext_Chrom_LSC	

Prep Batch: 501172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	Fill_Geo-21	
MB 160-501172/1-A	Method Blank	Total/NA	Water	Fill_Geo-21	
LCS 160-501172/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-21	
160-41401-1 DU	WC-002-030421	Total/NA	Water	Fill_Geo-21	

Prep Batch: 501551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	
MB 160-501551/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-501551/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-41401-1 MS	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	
160-41401-1 DU	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 501959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	Ext_Chrom_LSC	
MB 160-501959/1-A	Method Blank	Total/NA	Water	Ext_Chrom_LSC	
LCS 160-501959/2-A	Lab Control Sample	Total/NA	Water	Ext_Chrom_LSC	
160-41401-1 DU	WC-002-030421	Total/NA	Water	Ext_Chrom_LSC	

Prep Batch: 502269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	ExtChrom	
MB 160-502269/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-502269/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
160-41401-1 DU	WC-002-030421	Total/NA	Water	ExtChrom	

Prep Batch: 502278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	ExtChrom	
MB 160-502278/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-502278/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
160-41401-1 DU	WC-002-030421	Total/NA	Water	ExtChrom	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Rad

Prep Batch: 502280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	ExtChrom	
MB 160-502280/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-502280/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
160-41401-1 DU	WC-002-030421	Total/NA	Water	ExtChrom	

Prep Batch: 502281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	Leach_Precip	
MB 160-502281/1-A	Method Blank	Total/NA	Water	Leach_Precip	
LCS 160-502281/2-A	Lab Control Sample	Total/NA	Water	Leach_Precip	
160-41401-1 DU	WC-002-030421	Total/NA	Water	Leach_Precip	

Prep Batch: 502704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	PrecSep-7	
MB 160-502704/7-A	Method Blank	Total/NA	Water	PrecSep-7	
LCS 160-502704/1-A	Lab Control Sample	Total/NA	Water	PrecSep-7	
LCSD 160-502704/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-7	

Prep Batch: 502939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-41401-1	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	
MB 160-502939/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-502939/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-41401-1 MS	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	
160-41401-1 DU	WC-002-030421	Total/NA	Water	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-41401-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-41401-1	WC-002-030421	88.2	87.5
LCS 160-502704/1-A	Lab Control Sample	89.6	84.9
LCSD 160-502704/2-A	Lab Control Sample Dup	88.7	88.6
MB 160-502704/7-A	Method Blank	87.7	91.6

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-41401-1	WC-002-030421	72.8
160-41401-1 DU	WC-002-030421	58.3
LCS 160-502269/2-A	Lab Control Sample	92.5
MB 160-502269/1-A	Method Blank	103

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium and Neptunium (Alpha Spectrometry)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41401-1	WC-002-030421	84.4
160-41401-1 DU	WC-002-030421	77.2
LCS 160-502278/2-A	Lab Control Sample	98.4
MB 160-502278/1-A	Method Blank	101

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-41401-1	WC-002-030421	83.4
160-41401-1 DU	WC-002-030421	60.3
LCS 160-502280/2-A	Lab Control Sample	71.2
MB 160-502280/1-A	Method Blank	85.1

Tracer/Carrier Legend

U-232 = Uranium-232

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-41401-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-41401-1	WC-002-030421	79.8
160-41401-1 DU	WC-002-030421	81.6
LCS 160-500931/2-A	Lab Control Sample	101
MB 160-500931/1-A	Method Blank	88.3

Tracer/Carrier Legend

Ni = Ni Carrier

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-41401-1	WC-002-030421	84.4
160-41401-1 DU	WC-002-030421	77.2
LCS 160-502281/2-A	Lab Control Sample	98.4
MB 160-502281/1-A	Method Blank	101

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: ST-RC-0247 - Promethium-147 (LSC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Nd (20-110)
160-41401-1	WC-002-030421	82.4
160-41401-1 DU	WC-002-030421	86.4
LCS 160-501959/2-A	Lab Control Sample	85.8
MB 160-501959/1-A	Method Blank	95.0

Tracer/Carrier Legend

Nd = Nd

A-7
Final Status Survey

A-7.1
Samples FSS-001 through -016

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-43079-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
9/22/2021 8:30:32 PM

Ivan Vania, Project Manager II
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LINKS

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

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

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Job ID: 160-43079-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43079-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/13/2021 8:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.5º C, 23.4º C, 23.6º C and 24.7º C.

ASBESTOS

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/07/2021 and analyzed on 09/08/2021.

Analytical Batch 280-549084:
Lead was detected in method blank MB 280-548182/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Lead failed the recovery criteria low for the MS/MSD of sample FSS-001-081121MS/MSD (160-43079-1). Lead exceeded the RPD limit.

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

MERCURY (CVAA)

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/01/2021.

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

PERCENT SOLIDS

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/25/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/16/2021, prepared on 08/27/2021 and analyzed on 09/07/2021.

Samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9) and FSS-013-081221 (160-43079-13) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were prepared on 08/27/2021 and analyzed on 09/07/2021.

Preparation Batch 160-524352:
The bracketing daily background, analyzed the day after the sample was analyzed, was outside the upper QC acceptance limit indicating a potential high bias. The sample analysis on that detector had activity below the MDC indicating no adverse effect from the potential bias. In addition, the daily check and background analyzed on the day of sample analysis passed as did the bracketing daily check:

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

FSS-010-081121 (160-43079-10).

The sample duplicate (DUP) precision (RER/DER) was outside control limits. Sample non-homogeneity and a matrix effect was observed and noted during preparation. In addition, the original sample and sample duplicate both had activity below the RL: (160-43079-A-2-F DU).

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15), FSS-016-081221 (160-43079-16), and (160-43079-A-2-A DU).

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

TRITIUM

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 08/27/2021 and analyzed on 09/01/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/19/2021, prepared on 08/29/2021 and analyzed on 09/09/2021.

Samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9) and FSS-013-081221 (160-43079-13) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with DOE A01R_Pu. The samples were prepared on 08/31/2021 and analyzed on 09/10/2021.

Preparation Batch 160-524624:
Detectors 131-142 were calibrated in August; therefore, the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-002-081121 (160-43079-2), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15), FSS-016-081221 (160-43079-16), (LCS 160-524624/2-A), (MB 160-524624/1-A), and (160-43079-A-2-H DU).

Detectors 131-146 were calibrated in August therefore the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-013-081221 (160-43079-13).

The samples exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: FSS-003-081121 (160-43079-3) and FSS-004-081121 (160-43079-4).

The sample was counted on detector AV126 which failed the pulser resolution check the day after (closing bracket) the sample count. However, the sample tracer resolution was well within QC limits the day of the count. The laboratory does not believe this excursion adversely affects the data: FSS-004-081121 (160-43079-4).

Preparation Batch 160-524992:

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample results were based on as received weight. The samples were not dried and ground due to the nature of the sample matrices: FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9), and FSS-013-081221 (160-43079-13).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/19/2021, prepared on 08/29/2021 and analyzed on 09/08/2021 and 09/09/2021.

Samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9) and FSS-013-081221 (160-43079-13) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE A01R_U. The samples were prepared on 08/31/2021 and analyzed on 09/10/2021.

Preparation Batch 160-524626:
The sample was counted on detector AV199 which failed the pulser energy check the day after (closing bracket) the sample count. However, the sample tracer energy centroid was well within QC limits the day of the count. The laboratory does not believe this excursion adversely affects the data: FSS-007-081121 (160-43079-7).

The sample was counted on detector AV75 which failed the pulser efficiency check (low) the day after (closing bracket) the sample count. The sample pulser efficiency the day of the count as well as the tracer recovery was within QC limits the day of the count. While the lower efficiency may lead to a higher MDC, it would not affect the sample activity result (the efficiency effectively "cancels out" due to the tracer). Further, the MDC achieved is below the client requested limit. The laboratory does not believe this excursion adversely affects the data: FSS-014-081221 (160-43079-14).

Preparation Batch 160-524999:
The sample results were based on as received weight. The samples were not dried and ground due to the nature of the sample matrices: FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9), and FSS-013-081221 (160-43079-13).

Detectors 95, 96, 97, and 161 were calibrated in August therefore the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: (160-43124-D-6-K).

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

CARBON-14 BY LSC

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/09/2021 and analyzed on 09/10/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/16/2021,

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

prepared on 08/18/2021 and analyzed on 09/11/2021 and 09/13/2021.

Samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9) and FSS-013-081221 (160-43079-13) were analyzed for Radium 226 (21 day ingrowth) in accordance with DOE GA-01-R. The samples were prepared on 08/20/2021 and analyzed on 09/11/2021.

Preparation Batch 160-523357:
The replicate precision for Pb-212 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (160-43079-A-13-B DU).

For samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9), FSS-013-081221 (160-43079-13), (LCS 160-523357/2-A), (MB 160-523357/1-A), and (160-43079-A-13-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-523157:
The method blank z-score for Eu-152 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-523157/1-A).

The method blank z-score for Eu-154 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-523357/1-A).

For samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-007-081121

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15), FSS-016-081221 (160-43079-16), (LCS 160-523157/2-A), (MB 160-523157/1-A), and (160-43079-A-16-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred from Nuclide	Reported to Analyte Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-007-081121 (160-43079-7), FSS-008-081121 (160-43079-8), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/16/2021, prepared on 08/26/2021 and analyzed on 09/18/2021 and 09/19/2021.

Samples FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9) and FSS-013-081221 (160-43079-13) were analyzed for Nickel 59/63 in accordance with LSC-Nickel. The samples were prepared on 08/26/2021 and analyzed on 09/18/2021.

Preparation Batch 160-524237:
The carrier recovery for the sample failed below the lower QC limit at 35% (40%), indicating a potential high bias for analysis results. However, the sample final result was below the MDC and reporting limit (RL): FSS-005-081121 (160-43079-5).

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

PLUTONIUM 241

Samples FSS-001-081121 (160-43079-1), FSS-002-081121 (160-43079-2), FSS-003-081121 (160-43079-3), FSS-004-081121 (160-43079-4), FSS-005-081121 (160-43079-5), FSS-006-081121 (160-43079-6), FSS-007-081121 (160-43079-7), FSS-008-081121

Job ID: 160-43079-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43079-8), FSS-009-081121 (160-43079-9), FSS-010-081121 (160-43079-10), FSS-011-081121 (160-43079-11), FSS-012-081121 (160-43079-12), FSS-013-081221 (160-43079-13), FSS-014-081221 (160-43079-14), FSS-015-081221 (160-43079-15) and FSS-016-081221 (160-43079-16) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 08/29/2021 and 08/31/2021 and analyzed on 09/15/2021 and 09/16/2021.

Preparation Batch 160-525000:
The sample results were based on as received weight. The samples were not dried and ground due to the nature of the sample matrices: FSS-001-081121 (160-43079-1), FSS-005-081121 (160-43079-5), FSS-009-081121 (160-43079-9), and FSS-013-081221 (160-43079-13).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-12-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___2___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-001-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt A SU-7D
FSS-002-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 0-6"
FSS-003-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 6" -12"
FSS-004-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 18" -24
FSS-005-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt B SU-7D
FSS-006-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 0-6"
FSS-007-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 6" -12"
FSS-008-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 18" -24
FSS-009-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt C SU-7D
FSS-010-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 0-6"
FSS-011-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 6" -12"
FSS-012-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 18" -24

160-43079 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-12-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kominiarczuk	Company: ETA STL	Date/Time: AUG 13 2021 08:45
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-12-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-013-081221	12-Aug	8:00	C	S	4	N	N	1	1	1	1	1	1	1	1	Asphalt D SU-7D
FSS-014-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 0-6"
FSS-015-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 6" -12"
FSS-016-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 18" -24

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-12-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: Micha Konchinzyk	Company: ETA SRL	Date/Time: AUG 13 2021 08:45
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217526.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43079-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/12/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	Moisture	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-001-081121 (160-43079-1)	8/11/21	09:00 Eastern		Solid			X	X	X	1	
FSS-002-081121 (160-43079-2)	8/11/21	09:00 Eastern		Solid			X	X	X	1	
FSS-003-081121 (160-43079-3)	8/11/21	09:00 Eastern		Solid			X	X	X	1	
FSS-004-081121 (160-43079-4)	8/11/21	09:00 Eastern		Solid			X	X	X	1	
FSS-005-081121 (160-43079-5)	8/11/21	11:00 Eastern		Solid			X	X	X	1	
FSS-006-081121 (160-43079-6)	8/11/21	11:00 Eastern		Solid			X	X	X	1	
FSS-007-081121 (160-43079-7)	8/11/21	11:00 Eastern		Solid			X	X	X	1	
FSS-008-081121 (160-43079-8)	8/11/21	11:00 Eastern		Solid			X	X	X	1	
FSS-009-081121 (160-43079-9)	8/11/21	13:30 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Mara Konishinger	Date/Time: 8/13/2021 17:00	Company: EDA SR	Received by:	Date/Time: 8/14/21 0940	Company: EDEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ~~Yes~~ Δ No	Custody Seal No.: NA	Cooler Temperature(s) °C and Other Remarks: 3.9 IR-2 CF-06

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217526.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43079-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/12/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	Moisture	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-010-081121 (160-43079-10)	8/11/21	13:30 Eastern		Solid			X	X	X	1	
FSS-011-081121 (160-43079-11)	8/11/21	13:30 Eastern		Solid			X	X	X	1	
FSS-012-081121 (160-43079-12)	8/11/21	13:30 Eastern		Solid			X	X	X	1	
FSS-013-081121 (160-43079-13)	8/12/21	08:00 Eastern		Solid			X	X	X	1	
FSS-014-081121 (160-43079-14)	8/12/21	08:00 Eastern		Solid			X	X	X	1	
FSS-015-081121 (160-43079-15)	8/12/21	08:00 Eastern		Solid			X	X	X	1	
FSS-016-081121 (160-43079-16)	8/12/21	08:00 Eastern		Solid			X	X	X	1	
										1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by: Micha Koninings	Date/Time: 8/13/2021 17:00	Company ETA SPL	Received by:	Date/Time: 8/14/21 0940	Company ETALEN	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH10632300

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218033.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43079-1
Address: 350 Hochberg Rd,	Due Date Requested: 9/13/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos)/ Asbestos	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-001-081121 (160-43079-1)	8/11/21	09:00 Eastern		Solid			X		1	
FSS-002-081121 (160-43079-2)	8/11/21	09:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-003-081121 (160-43079-3)	8/11/21	09:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-004-081121 (160-43079-4)	8/11/21	09:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-005-081121 (160-43079-5)	8/11/21	11:00 Eastern		Solid			X		1	
FSS-006-081121 (160-43079-6)	8/11/21	11:00 Eastern		Solid			X		1	
FSS-007-081121 (160-43079-7)	8/11/21	11:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-008-081121 (160-43079-8)	8/11/21	11:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-009-081121 (160-43079-9)	8/11/21	13:30 Eastern		Solid			X		1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Michael Kavinsky	8/13/2021 17:00	ETAS	Linda Mauger	8/24/21 2:57 PM	RJ Lee Group
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH106323-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218033.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43079-1
Address: 350 Hochberg Rd.	Due Date Requested: 9/13/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos)/ Asbestos	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-010-081121 (160-43079-10)	8/11/21	13:30 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-011-081121 (160-43079-11)	8/11/21	13:30 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-012-081121 (160-43079-12)	8/11/21	13:30 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-013-081221 (160-43079-13)	8/12/21	08:00 Eastern		Solid			X		1	
FSS-014-081221 (160-43079-14)	8/12/21	08:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-015-081221 (160-43079-15)	8/12/21	08:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-016-081221 (160-43079-16)	8/12/21	08:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change. Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmenca laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Mitchakennington	8/13/2021 17:00	EurA St	Lindamaugus	08242021 2:51pm	RJLeeGroup
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43079-1

Login Number: 43079
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43079-1

Login Number: 43079
List Number: 2
Creator: Rystrom, Joshua R

List Source: Eurofins TestAmerica, Denver
List Creation: 08/14/21 11:48 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43079-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium analysis by Alpha Spec	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
Subcontract	PLM-EPA600-R-93	None	RJLee-SRO
Part Size Red	Particle Size Reduction Preparation	None	TAL SL
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43079-1	FSS-001-081121	Solid	08/11/21 09:00	08/13/21 08:45
160-43079-2	FSS-002-081121	Solid	08/11/21 09:00	08/13/21 08:45
160-43079-3	FSS-003-081121	Solid	08/11/21 09:00	08/13/21 08:45
160-43079-4	FSS-004-081121	Solid	08/11/21 09:00	08/13/21 08:45
160-43079-5	FSS-005-081121	Solid	08/11/21 11:00	08/13/21 08:45
160-43079-6	FSS-006-081121	Solid	08/11/21 11:00	08/13/21 08:45
160-43079-7	FSS-007-081121	Solid	08/11/21 11:00	08/13/21 08:45
160-43079-8	FSS-008-081121	Solid	08/11/21 11:00	08/13/21 08:45
160-43079-9	FSS-009-081121	Solid	08/11/21 13:30	08/13/21 08:45
160-43079-10	FSS-010-081121	Solid	08/11/21 13:30	08/13/21 08:45
160-43079-11	FSS-011-081121	Solid	08/11/21 13:30	08/13/21 08:45
160-43079-12	FSS-012-081121	Solid	08/11/21 13:30	08/13/21 08:45
160-43079-13	FSS-013-081221	Solid	08/12/21 08:00	08/13/21 08:45
160-43079-14	FSS-014-081221	Solid	08/12/21 08:00	08/13/21 08:45
160-43079-15	FSS-015-081221	Solid	08/12/21 08:00	08/13/21 08:45
160-43079-16	FSS-016-081221	Solid	08/12/21 08:00	08/13/21 08:45

Client Sample ID: FSS-001-081121

Date Collected: 08/11/21 09:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0667	U	0.158	0.158	3.00	0.278	pCi/g	08/27/21 13:56	09/07/21 16:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.4*		*40 - 110*	*08/27/21 13:56*	*09/07/21 16:54*	*1*
Y Carrier	*95.3*		*40 - 110*	*08/27/21 13:56*	*09/07/21 16:54*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.127	U	0.237	0.237	1.00	0.413	pCi/g	08/27/21 08:28	09/01/21 09:35	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0125	U	0.0208	0.0208	1.00	0.0734	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.00417	U	0.0252	0.0252	1.00	0.0626	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.5*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.127**		0.0714	0.0722	1.00	0.0807	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235	-0.0127	U	0.0111	0.0112	1.00	0.0723	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.104**		0.0578	0.0584	1.00	0.0395	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.0*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.467	U	0.835	0.836	5.00	1.42	pCi/g	09/09/21 09:41	09/10/21 16:34	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.110	U	0.292	0.293		0.370	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Americium-241	0.0720	U	0.127	0.127		0.216	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Bismuth-212	-0.752	U	1.01	1.01		1.71	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Bismuth-214	0.0698	U	0.246	0.246		0.416	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Cesium-137	-0.00571	U	0.0747	0.0747		0.135	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Cobalt-60	0.00362	U	0.00227	0.00230		0.117	pCi/g	08/20/21 09:48	09/11/21 07:41	1

Client Sample ID: FSS-001-081121

Lab Sample ID: 160-43079-1

Date Collected: 08/11/21 09:00

Matrix: Solid

Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	**0.164**		0.0656	0.0677		0.145	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Europium-154	0.0469	U	0.0980	0.0981		0.0982	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Europium-155	0.0990	U	0.348	0.348		0.592	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Lead-212	**0.282**		0.106	0.111		0.105	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Lead-214	0.0232	U	0.0572	0.0573		0.364	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Potassium-40	**3.71**		1.47	1.51		1.33	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Radium-226	0.0698	U	0.246	0.246	1.00	0.416	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Radium-228	0.110	U	0.292	0.293		0.370	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Sodium-22	0.00974	U	0.0434	0.0434		0.0844	pCi/g	08/20/21 09:48	09/11/21 07:41	1
Zinc-65	-0.158	U	0.132	0.133		0.438	pCi/g	08/20/21 09:48	09/11/21 07:41	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.563	U	0.885	0.887	5.00	1.51	pCi/g	08/26/21 10:56	09/18/21 08:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.1*		*40 - 110*	*08/26/21 10:56*	*09/18/21 08:25*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.284	U	1.11	1.11	5.00	2.01	pCi/g	08/31/21 14:29	09/15/21 15:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.5*		*30 - 110*	*08/31/21 14:29*	*09/15/21 15:07*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			08/19/21 16:11	1

Client Sample ID: FSS-001-081121

Lab Sample ID: 160-43079-1

Date Collected: 08/11/21 09:00

Matrix: Solid

Date Received: 08/13/21 08:45

Percent Solids: 97.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**14**	**J1**	0.39	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 03:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/01/21 15:10	09/01/21 17:27	1

Client Sample ID: FSS-002-081121

Date Collected: 08/11/21 09:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-2

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.117	U	0.165	0.165	3.00	0.282	pCi/g	08/27/21 13:56	09/07/21 16:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.5*		*40 - 110*	*08/27/21 13:56*	*09/07/21 16:55*	*1*
Y Carrier	*94.2*		*40 - 110*	*08/27/21 13:56*	*09/07/21 16:55*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.193	U	0.241	0.242	1.00	0.407	pCi/g	08/27/21 08:28	09/01/21 09:57	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00720	U	0.00998	0.00999	1.00	0.0806	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.00721	U	0.0300	0.0300	1.00	0.0807	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*48.9*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00468	U	0.00917	0.00917	1.00	0.0905	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	**0.113**		0.0900	0.0905	1.00	0.113	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*48.6*		*30 - 110*	*08/29/21 20:35*	*09/08/21 13:49*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.491	U	0.860	0.861	5.00	1.47	pCi/g	09/09/21 09:41	09/10/21 16:57	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.285**		0.137	0.140		0.250	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Americium-241	0.0589	U	0.147	0.147		0.253	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Bismuth-212	0.351	U	0.605	0.606		1.05	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Bismuth-214	**0.336**		0.0953	0.101		0.0807	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Cesium-137	-0.0163	U	0.0550	0.0550		0.118	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Cobalt-60	0.0337	U	0.0250	0.0252		0.0355	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Europium-152	0.0466	U	0.0698	0.0700		0.157	pCi/g	08/18/21 14:03	09/11/21 18:21	1

Client Sample ID: FSS-002-081121

Lab Sample ID: 160-43079-2
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0117	U	0.0749	0.0749		0.131	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Europium-155	-0.0939	U	0.220	0.220		0.459	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Lead-212	**0.272**		0.0794	0.0866		0.0999	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Lead-214	**0.364**		0.109	0.115		0.107	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Potassium-40	**4.30**		1.05	1.14		0.890	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Radium-226	**0.336**		0.0953	0.101	1.00	0.0807	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Sodium-22	0.0217	U	0.0357	0.0358		0.0627	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Thorium-232	**0.285**		0.137	0.140		0.250	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Zinc-65	-0.0173	U	0.116	0.116		0.234	pCi/g	08/18/21 14:03	09/11/21 18:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.404	U	0.868	0.869	5.00	1.49	pCi/g	08/26/21 10:56	09/18/21 09:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*88.8*		*40 - 110*	*08/26/21 10:56*	*09/18/21 09:31*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.80	U	2.21	2.21	5.00	3.96	pCi/g	08/29/21 20:28	09/15/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*48.9*		*30 - 110*	*08/29/21 20:28*	*09/15/21 15:44*	*1*

Client Sample ID: FSS-002-081121

Lab Sample ID: 160-43079-2
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 91.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.9**		0.39	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 04:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.6	ug/Kg	☼	09/01/21 15:10	09/01/21 17:40	1

Client Sample ID: FSS-003-081121

Lab Sample ID: 160-43079-3
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.166	U	0.172	0.172	3.00	0.340	pCi/g	08/27/21 13:56	09/07/21 17:20	1

Client Sample ID: FSS-003-081121

Date Collected: 08/11/21 09:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-3

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	84.3		40 - 110	08/27/21 13:56	09/07/21 17:20	1
Y Carrier	94.6		40 - 110	08/27/21 13:56	09/07/21 17:20	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0115	U	0.229	0.229	1.00	0.422	pCi/g	08/27/21 08:28	09/01/21 10:20	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0278	U	0.0173	0.0174	1.00	0.0982	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	-0.00557	U	0.0256	0.0256	1.00	0.0836	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	69.8		30 - 110	08/29/21 18:19	09/09/21 13:00	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0205	U	0.0390	0.0391	1.00	0.0765	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	**0.255**		0.106	0.108	1.00	0.0678	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	60.5		30 - 110	08/29/21 20:35	09/08/21 13:49	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.289	U	0.856	0.856	5.00	1.56	pCi/g	09/09/21 09:41	09/10/21 17:42	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.132	U	0.152	0.152		0.224	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Americium-241	0.0511	U	0.113	0.113		0.193	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Bismuth-212	0.452	U	0.799	0.800		1.37	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Bismuth-214	**0.359**		0.102	0.108		0.0916	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Cesium-137	-0.0190	U	0.0564	0.0564		0.0989	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Cobalt-60	-0.0297	U	0.0734	0.0735		0.0815	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Europium-152	0.0499	U	0.114	0.114		0.140	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Europium-154	0.0455	U	0.0706	0.0708		0.0978	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Europium-155	-0.00779	U	0.132	0.132		0.364	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Lead-212	0.0396	U	0.0941	0.0942		0.161	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Lead-214	**0.358**		0.0891	0.0963		0.0989	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Potassium-40	**4.42**		0.856	0.964		0.603	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Radium-226	**0.359**		0.102	0.108	1.00	0.0916	pCi/g	08/18/21 14:03	09/11/21 18:21	1

Client Sample ID: FSS-003-081121

Lab Sample ID: 160-43079-3
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	0.00838	U	0.0260	0.0260		0.0495	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Thorium-232	0.132	U	0.152	0.152		0.224	pCi/g	08/18/21 14:03	09/11/21 18:21	1
Zinc-65	0.000	U	0.0177	0.0177		0.185	pCi/g	08/18/21 14:03	09/11/21 18:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.321	U	0.824	0.825	5.00	1.47	pCi/g	08/26/21 10:56	09/18/21 10:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.4*		*40 - 110*	*08/26/21 10:56*	*09/18/21 10:38*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.09	U	1.48	1.49	5.00	2.73	pCi/g	08/29/21 20:28	09/15/21 17:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.8*		*30 - 110*	*08/29/21 20:28*	*09/15/21 17:56*	*1*

Client Sample ID: FSS-003-081121

Lab Sample ID: 160-43079-3
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 86.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.6		0.41	0.019	mg/Kg	☼	09/07/21 07:45	09/08/21 04:15	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	23	7.4	ug/Kg	☼	09/01/21 15:10	09/01/21 17:42	1

Client Sample ID: FSS-004-081121

Lab Sample ID: 160-43079-4
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0553	U	0.177	0.177	3.00	0.314	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.0*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*93.1*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Client Sample ID: FSS-004-081121

Date Collected: 08/11/21 09:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-4

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.222	U	0.244	0.245	1.00	0.407	pCi/g	08/27/21 08:28	09/01/21 10:43	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0530	U	0.0227	0.0231	1.00	0.115	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	-0.0228	U	0.0149	0.0150	1.00	0.0861	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.7*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00282	U	0.00552	0.00553	1.00	0.0546	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	**0.165**		0.0776	0.0788	1.00	0.0559	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.1*		*30 - 110*	*08/29/21 20:35*	*09/08/21 13:49*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.296	U	0.906	0.907	5.00	1.58	pCi/g	09/09/21 09:41	09/10/21 18:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.540**		0.156	0.165		0.0865	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Americium-241	0.0632	U	0.157	0.158		0.270	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Bismuth-212	0.333	U	0.703	0.704		1.22	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Bismuth-214	**0.382**		0.108	0.115		0.100	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Cesium-137	0.0214	U	0.0442	0.0442		0.0775	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Cobalt-60	0.00544	U	0.0255	0.0255		0.0614	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-152	0.0784	U	0.190	0.190		0.186	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-154	0.0263	U	0.0677	0.0677		0.117	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-155	0.00198	U	0.00374	0.00375		0.372	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Lead-212	**0.306**		0.104	0.111		0.116	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Lead-214	**0.232**		0.117	0.119		0.177	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Potassium-40	**3.51**		0.864	0.933		0.708	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Radium-226	**0.382**		0.108	0.115	1.00	0.100	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Sodium-22	0.0103	U	0.0420	0.0420		0.0790	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Thorium-232	**0.540**		0.156	0.165		0.0865	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Zinc-65	-0.000370	U	0.121	0.121		0.225	pCi/g	08/18/21 14:03	09/11/21 18:57	1

Client Sample ID: FSS-004-081121
Lab Sample ID: 160-43079-4
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.00647	U	0.873	0.873	5.00	1.53	pCi/g	08/26/21 10:56	09/18/21 11:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.0*		*40 - 110*	*08/26/21 10:56*	*09/18/21 11:44*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.37	U	1.30	1.32	5.00	2.49	pCi/g	08/29/21 20:28	09/15/21 19:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.7*		*30 - 110*	*08/29/21 20:28*	*09/15/21 19:02*	*1*

Client Sample ID: FSS-004-081121
Lab Sample ID: 160-43079-4
Date Collected: 08/11/21 09:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 93.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.3		0.31	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 04:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/01/21 15:10	09/01/21 17:50	1

Client Sample ID: FSS-005-081121
Lab Sample ID: 160-43079-5
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0981	U	0.185	0.185	3.00	0.321	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.7*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*94.2*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0802	U	0.234	0.235	1.00	0.418	pCi/g	08/27/21 08:28	09/01/21 11:05	1

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Client Sample ID: FSS-005-081121

Date Collected: 08/11/21 11:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-5

Matrix: Solid

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00406	U	0.0245	0.0245	1.00	0.0609	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.00609	U	0.0164	0.0164	1.00	0.0393	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.135**		0.0738	0.0746	1.00	0.0698	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235	-0.00289	U	0.00567	0.00568	1.00	0.0560	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.225**		0.0913	0.0932	1.00	0.0574	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.2*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.986	U	0.935	0.941	5.00	1.53	pCi/g	09/09/21 09:41	09/10/21 18:50	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.192**		0.140	0.142		0.185	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Americium-241	0.0676	U	0.169	0.169		0.290	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Bismuth-212	-0.582	U	0.960	0.962		1.65	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Bismuth-214	**0.287**		0.116	0.120		0.114	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Cesium-137	-0.0204	U	0.0626	0.0627		0.138	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Cobalt-60	-0.0507	U	0.106	0.106		0.120	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Europium-152	0.112	U	0.0810	0.0818		0.331	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Europium-154	0.0867	U	0.122	0.122		0.112	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Europium-155	0.0663	U	0.102	0.103		0.230	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Lead-212	**0.217**		0.0768	0.0816		0.0982	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Lead-214	**0.279**		0.0886	0.0931		0.104	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Potassium-40	**3.89**		1.02	1.09		0.875	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Radium-226	**0.287**		0.116	0.120	1.00	0.114	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Radium-228	**0.192**		0.140	0.142		0.185	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Sodium-22	-0.00182	U	0.0354	0.0354		0.0734	pCi/g	08/20/21 09:48	09/11/21 07:40	1
Zinc-65	0.137	U	0.104	0.105		0.153	pCi/g	08/20/21 09:48	09/11/21 07:40	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-1.44	U	1.90	1.90	5.00	3.41	pCi/g	08/26/21 10:56	09/18/21 12:50	1

Client Sample ID: FSS-005-081121

Lab Sample ID: 160-43079-5
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	35.1	Q	40 - 110	08/26/21 10:56	09/18/21 12:50	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.469	U	1.01	1.01	5.00	1.75	pCi/g	08/31/21 14:29	09/15/21 16:13	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	101		30 - 110	08/31/21 14:29	09/15/21 16:13	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			08/19/21 16:11	1

Client Sample ID: FSS-005-081121

Lab Sample ID: 160-43079-5
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 98.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.6		0.40	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 04:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.7	ug/Kg	☼	09/01/21 15:10	09/01/21 17:52	1

Client Sample ID: FSS-006-081121

Lab Sample ID: 160-43079-6
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.139	U	0.237	0.237	1.00	0.411	pCi/g	08/27/21 08:28	09/01/21 11:28	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00471	U	0.0285	0.0285	1.00	0.0708	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	-0.00236	U	0.00462	0.00463	1.00	0.0457	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.9		30 - 110	08/29/21 18:19	09/09/21 13:00	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0191	U	0.0389	0.0389	1.00	0.0775	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	0.155		0.0776	0.0787	1.00	0.0744	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Client Sample ID: FSS-006-081121

Lab Sample ID: 160-43079-6
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	78.4		30 - 110	08/29/21 20:35	09/08/21 13:49	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.44	U	1.20	1.21	5.00	2.21	pCi/g	08/29/21 20:28	09/15/21 20:08	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.9		30 - 110	08/29/21 20:28	09/15/21 20:08	1

Client Sample ID: FSS-006-081121

Lab Sample ID: 160-43079-6
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 95.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.2		0.34	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 04:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/01/21 15:10	09/01/21 17:55	1

Client Sample ID: FSS-007-081121

Lab Sample ID: 160-43079-7
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0998	U	0.193	0.193	3.00	0.335	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.2		40 - 110	08/27/21 13:56	09/07/21 17:21	1
Y Carrier	96.1		40 - 110	08/27/21 13:56	09/07/21 17:21	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0976	U	0.240	0.240	1.00	0.426	pCi/g	08/27/21 08:28	09/01/21 11:50	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00292	U	0.0262	0.0262	1.00	0.0831	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.00292	U	0.0250	0.0250	1.00	0.0724	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	63.3		30 - 110	08/29/21 18:19	09/09/21 13:00	1

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Client Sample ID: FSS-007-081121

Date Collected: 08/11/21 11:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-7

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00289	U	0.0354	0.0354	1.00	0.0910	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	**0.165**		0.0799	0.0810	1.00	0.0660	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.1*		*30 - 110*	*08/29/21 20:35*	*09/08/21 13:49*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.635	U	0.826	0.829	5.00	1.39	pCi/g	09/09/21 09:41	09/10/21 19:12	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.384**		0.120	0.126		0.0725	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Americium-241	-0.0402	U	0.0751	0.0752		0.169	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Bismuth-212	0.000	U	0.404	0.404		1.17	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Bismuth-214	**0.311**		0.100	0.105		0.102	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Cesium-137	0.0179	U	0.0346	0.0346		0.0607	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Cobalt-60	0.0338	U	0.0177	0.0180		0.0709	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-152	0.102	U	0.212	0.212		0.318	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-154	0.0362	U	0.0360	0.0362		0.119	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Europium-155	0.0649	U	0.223	0.223		0.381	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Lead-212	**0.342**		0.0707	0.0829		0.0765	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Lead-214	**0.341**		0.0793	0.0865		0.0771	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Potassium-40	**5.24**		0.942	1.08		0.625	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Radium-226	**0.311**		0.100	0.105	1.00	0.102	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Sodium-22	-0.0335	U	0.0478	0.0479		0.0816	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Thorium-232	**0.384**		0.120	0.126		0.0725	pCi/g	08/18/21 14:03	09/11/21 18:57	1
Zinc-65	0.0547	U	0.117	0.117		0.205	pCi/g	08/18/21 14:03	09/11/21 18:57	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.150	U	0.862	0.862	5.00	1.49	pCi/g	08/26/21 10:56	09/18/21 13:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.1*		*40 - 110*	*08/26/21 10:56*	*09/18/21 13:56*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.69	U	1.72	1.74	5.00	3.23	pCi/g	08/29/21 20:28	09/15/21 21:15	1

Client Sample ID: FSS-007-081121
Lab Sample ID: 160-43079-7
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	63.3		30 - 110	08/29/21 20:28	09/15/21 21:15	1

Client Sample ID: FSS-007-081121
Lab Sample ID: 160-43079-7
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 90.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.9**		0.32	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 04:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	17	U	21	6.9	ug/Kg	☼	09/01/21 15:10	09/01/21 17:57	1

Client Sample ID: FSS-008-081121
Lab Sample ID: 160-43079-8
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0228	U	0.205	0.205	3.00	0.376	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.4		40 - 110	08/27/21 13:56	09/07/21 17:21	1
Y Carrier	94.2		40 - 110	08/27/21 13:56	09/07/21 17:21	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0474	U	0.220	0.220	1.00	0.418	pCi/g	08/27/21 08:28	09/01/21 12:13	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00309	U	0.00607	0.00607	1.00	0.0599	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	-0.00310	U	0.00607	0.00608	1.00	0.0600	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	54.7		30 - 110	08/29/21 18:19	09/09/21 13:00	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00673	U	0.00932	0.00934	1.00	0.0753	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.248**		0.101	0.103	1.00	0.0324	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	70.4		30 - 110	08/29/21 20:35	09/08/21 14:03	1

Client Sample ID: FSS-008-081121

Lab Sample ID: 160-43079-8

Date Collected: 08/11/21 11:00

Matrix: Solid

Date Received: 08/13/21 08:45

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.245	U	0.823	0.823	5.00	1.42	pCi/g	09/09/21 09:41	09/10/21 19:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.305**		0.101	0.105		0.0642	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Americium-241	-0.0549	U	0.124	0.124		0.211	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Bismuth-212	-0.0234	U	0.511	0.511		0.931	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Bismuth-214	**0.238**		0.0785	0.0821		0.0815	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Cesium-137	-0.0176	U	0.0508	0.0508		0.0890	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Cobalt-60	-0.0148	U	0.0545	0.0545		0.0627	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Europium-152	0.0687	U	0.110	0.110		0.306	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Europium-154	0.0292	U	0.0587	0.0588		0.0892	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Europium-155	-0.0315	U	0.202	0.202		0.347	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Lead-212	**0.358**		0.0646	0.0790		0.0630	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Lead-214	**0.284**		0.0963	0.101		0.0928	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Potassium-40	**4.98**		0.811	0.953		0.253	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Radium-226	**0.238**		0.0785	0.0821	1.00	0.0815	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Sodium-22	0.00548	U	0.0318	0.0318		0.0605	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Thorium-232	**0.305**		0.101	0.105		0.0642	pCi/g	08/18/21 14:03	09/11/21 18:58	1
Zinc-65	0.000	U	0.0324	0.0324		0.218	pCi/g	08/18/21 14:03	09/11/21 18:58	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.110	U	0.876	0.876	5.00	1.53	pCi/g	08/26/21 10:56	09/18/21 16:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.9*		*40 - 110*	*08/26/21 10:56*	*09/18/21 16:08*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.34	U	1.99	1.99	5.00	3.56	pCi/g	08/29/21 20:28	09/15/21 22:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*54.7*		*30 - 110*	*08/29/21 20:28*	*09/15/21 22:21*	*1*

Client Sample ID: FSS-008-081121

Lab Sample ID: 160-43079-8

Date Collected: 08/11/21 11:00

Matrix: Solid

Date Received: 08/13/21 08:45

Percent Solids: 95.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.9**		0.36	0.016	mg/Kg	☼	09/07/21 07:45	09/08/21 04:32	1

Client Sample ID: FSS-008-081121

Lab Sample ID: 160-43079-8
Date Collected: 08/11/21 11:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 95.3

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.4	ug/Kg	☼	09/01/21 15:10	09/01/21 18:00	1

Client Sample ID: FSS-009-081121

Lab Sample ID: 160-43079-9
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.174	U	0.214	0.215	3.00	0.362	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*72.3*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*94.2*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0938	U	0.231	0.232	1.00	0.409	pCi/g	08/27/21 08:28	09/01/21 12:36	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00195	U	0.0176	0.0176	1.00	0.0556	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00587	U	0.00664	0.00666	1.00	0.0484	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.1*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.148**		0.0688	0.0698	1.00	0.0569	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235	0.0165	U	0.0266	0.0266	1.00	0.0457	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.0530**		0.0426	0.0429	1.00	0.0506	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.2*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.187	U	0.740	0.740	5.00	1.28	pCi/g	09/09/21 09:41	09/10/21 19:58	1

Client Sample ID: FSS-009-081121

Lab Sample ID: 160-43079-9

Date Collected: 08/11/21 13:30

Matrix: Solid

Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.332**		0.152	0.155		0.193	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Americium-241	0.0489	U	0.104	0.104		0.137	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Bismuth-212	-0.527	U	0.800	0.802		1.36	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Bismuth-214	**0.373**		0.112	0.118		0.107	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Cesium-137	0.00344	U	0.0602	0.0602		0.0751	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Cobalt-60	0.000	U	0.00850	0.00850		0.0319	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Europium-152	**0.159**		0.0971	0.0984		0.115	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Europium-154	0.0197	U	0.0286	0.0287		0.110	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Europium-155	0.0715	U	0.254	0.254		0.434	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Lead-212	**0.265**		0.0658	0.0739		0.0719	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Lead-214	**0.414**		0.0876	0.0973		0.0849	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Potassium-40	**3.62**		0.998	1.06		0.887	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Radium-226	**0.373**		0.112	0.118	1.00	0.107	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Radium-228	**0.332**		0.152	0.155		0.193	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Sodium-22	**0.0335**		0.0232	0.0234		0.0308	pCi/g	08/20/21 09:48	09/11/21 07:03	1
Zinc-65	0.00506	U	0.116	0.116		0.214	pCi/g	08/20/21 09:48	09/11/21 07:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0723	U	0.903	0.903	5.00	1.58	pCi/g	08/26/21 10:56	09/18/21 17:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*79.9*		*40 - 110*	*08/26/21 10:56*	*09/18/21 17:15*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.0957	U	1.11	1.11	5.00	1.96	pCi/g	08/31/21 14:29	09/15/21 17:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.1*		*30 - 110*	*08/31/21 14:29*	*09/15/21 17:19*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			08/19/21 16:11	1

Client Sample ID: FSS-009-081121

Lab Sample ID: 160-43079-9

Date Collected: 08/11/21 13:30

Matrix: Solid

Date Received: 08/13/21 08:45

Percent Solids: 98.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.7**		0.38	0.017	mg/Kg	☼	09/07/21 07:45	09/08/21 04:36	1

Client Sample ID: FSS-009-081121

Lab Sample ID: 160-43079-9
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 98.6

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/01/21 15:10	09/01/21 18:02	1

Client Sample ID: FSS-010-081121

Lab Sample ID: 160-43079-10
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0605	U	0.191	0.191	3.00	0.338	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.9*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*95.0*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.146	U	0.241	0.242	1.00	0.419	pCi/g	08/27/21 08:28	09/01/21 12:58	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00238	U	0.00466	0.00466	1.00	0.0460	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.000	U	0.00466	0.00466	1.00	0.0285	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.8*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0236	U	0.0327	0.0328	1.00	0.0354	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.421**		0.125	0.129	1.00	0.0530	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.4*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:03*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0944	U	0.852	0.852	5.00	1.51	pCi/g	09/09/21 09:41	09/10/21 20:20	1

Client Sample ID: FSS-010-081121

Lab Sample ID: 160-43079-10

Date Collected: 08/11/21 13:30

Matrix: Solid

Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.886**		0.175	0.196		0.158	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Americium-241	0.0770	U	0.202	0.202		0.346	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Bismuth-212	0.461	U	0.851	0.852		1.47	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Bismuth-214	**0.581**		0.145	0.157		0.117	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Cesium-137	0.000928	U	0.0576	0.0576		0.107	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Cobalt-60	0.0123	U	0.0394	0.0395		0.0737	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Europium-152	**0.231**		0.115	0.118		0.178	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Europium-154	0.0479	U	0.0600	0.0602		0.164	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Europium-155	0.0919	U	0.269	0.269		0.460	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Lead-212	**0.738**		0.132	0.162		0.153	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Lead-214	**0.749**		0.152	0.170		0.133	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Potassium-40	**5.26**		1.14	1.25		0.849	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Radium-226	**0.581**		0.145	0.157	1.00	0.117	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Sodium-22	0.000	U	0.0104	0.0104		0.0390	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Thorium-232	**0.886**		0.175	0.196		0.158	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Zinc-65	-0.00525	U	0.138	0.138		0.328	pCi/g	08/18/21 14:03	09/11/21 19:42	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.163	U	0.960	0.960	5.00	1.67	pCi/g	08/26/21 10:56	09/18/21 18:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.9*		*40 - 110*	*08/26/21 10:56*	*09/18/21 18:21*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.184	U	1.81	1.81	5.00	3.24	pCi/g	08/29/21 20:28	09/15/21 23:27	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.8*		*30 - 110*	*08/29/21 20:28*	*09/15/21 23:27*	*1*

Client Sample ID: FSS-010-081121

Lab Sample ID: 160-43079-10

Date Collected: 08/11/21 13:30

Matrix: Solid

Date Received: 08/13/21 08:45

Percent Solids: 94.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.2**		0.36	0.017	mg/Kg	☼	09/07/21 07:45	09/08/21 04:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**6.7**	**J**	18	6.0	ug/Kg	☼	09/01/21 15:10	09/01/21 18:05	1

Client Sample ID: FSS-011-081121

Date Collected: 08/11/21 13:30
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-11

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.218	U	0.197	0.198	3.00	0.324	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.7*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*92.3*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0852	U	0.218	0.218	1.00	0.422	pCi/g	08/27/21 08:28	09/01/21 13:21	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00729	U	0.00825	0.00828	1.00	0.0602	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00487	U	0.00675	0.00676	1.00	0.0545	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*71.2*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.000	U	0.00583	0.00583	1.00	0.0357	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.327**		0.111	0.114	1.00	0.0590	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*65.7*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:03*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.279	U	0.917	0.918	5.00	1.58	pCi/g	09/09/21 09:41	09/10/21 20:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**1.43**		0.207	0.252		0.110	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Americium-241	-0.0939	U	0.0722	0.0728		0.244	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Bismuth-212	0.391	U	0.793	0.794		1.37	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Bismuth-214	**0.843**		0.141	0.165		0.104	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Cesium-137	-0.0134	U	0.0794	0.0794		0.139	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Cobalt-60	0.0277	U	0.0458	0.0459		0.0736	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Europium-152	0.137	U	0.271	0.271		0.423	pCi/g	08/18/21 14:03	09/11/21 19:42	1

Client Sample ID: FSS-011-081121

Lab Sample ID: 160-43079-11
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0751	U	0.121	0.121		0.131	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Europium-155	-0.000927	U	0.0851	0.0851		0.597	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Lead-212	**1.30**		0.126	0.207		0.0970	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Lead-214	**0.836**		0.120	0.147		0.126	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Potassium-40	**4.56**		0.905	1.01		0.649	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Radium-226	**0.843**		0.141	0.165	1.00	0.104	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Sodium-22	-0.0386	U	0.0514	0.0515		0.0869	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Thorium-232	**1.43**		0.207	0.252		0.110	pCi/g	08/18/21 14:03	09/11/21 19:42	1
Zinc-65	0.000	U	0.0329	0.0329		0.256	pCi/g	08/18/21 14:03	09/11/21 19:42	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0332	U	0.853	0.853	5.00	1.49	pCi/g	08/26/21 10:56	09/18/21 19:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.1*		*40 - 110*	*08/26/21 10:56*	*09/18/21 19:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.86	U	1.61	1.62	5.00	3.06	pCi/g	08/29/21 20:28	09/16/21 00:33	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*71.2*		*30 - 110*	*08/29/21 20:28*	*09/16/21 00:33*	*1*

Client Sample ID: FSS-011-081121

Lab Sample ID: 160-43079-11
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 93.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.6**		0.33	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 04:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/01/21 15:10	09/01/21 18:07	1

Client Sample ID: FSS-012-081121

Lab Sample ID: 160-43079-12
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0588	U	0.186	0.186	3.00	0.330	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Client Sample ID: FSS-012-081121

Date Collected: 08/11/21 13:30
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-12

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.5		40 - 110	08/27/21 13:56	09/07/21 17:21	1
Y Carrier	93.5		40 - 110	08/27/21 13:56	09/07/21 17:21	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0376	U	0.228	0.228	1.00	0.415	pCi/g	08/27/21 08:28	09/01/21 13:43	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00699	U	0.0188	0.0188	1.00	0.0451	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00233	U	0.00457	0.00458	1.00	0.0452	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	73.8		30 - 110	08/29/21 18:19	09/09/21 21:38	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0418	U	0.0475	0.0476	1.00	0.0668	pCi/g	08/29/21 20:35	09/08/21 14:04	1
Uranium-238	**0.684**		0.159	0.169	1.00	0.0536	pCi/g	08/29/21 20:35	09/08/21 14:04	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	71.5		30 - 110	08/29/21 20:35	09/08/21 14:04	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.405	U	0.855	0.856	5.00	1.47	pCi/g	09/09/21 09:41	09/10/21 21:05	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**1.14**		0.168	0.203		0.259	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Americium-241	-0.0891	U	0.185	0.185		0.314	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Bismuth-212	**1.26**		0.601	0.615		0.569	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Bismuth-214	**0.744**		0.130	0.150		0.0902	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Cesium-137	0.0315	U	0.0648	0.0649		0.112	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Cobalt-60	-0.000303	U	0.000472	0.000473		0.0787	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Europium-152	0.0604	U	0.107	0.107		0.164	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Europium-154	0.0153	U	0.0263	0.0264		0.123	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Europium-155	0.000	U	0.111	0.111		0.536	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Lead-212	**1.09**		0.109	0.176		0.0863	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Lead-214	**0.673**		0.0989	0.120		0.100	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Potassium-40	**6.05**		0.918	1.10		0.267	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Radium-226	**0.744**		0.130	0.150	1.00	0.0902	pCi/g	08/18/21 14:03	09/11/21 19:41	1

Client Sample ID: FSS-012-081121

Lab Sample ID: 160-43079-12
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	-0.0116	U	0.0480	0.0481		0.0874	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Thorium-232	**1.14**		0.168	0.203		0.259	pCi/g	08/18/21 14:03	09/11/21 19:41	1
Zinc-65	0.000	U	0.0296	0.0296		0.267	pCi/g	08/18/21 14:03	09/11/21 19:41	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0926	U	1.08	1.08	5.00	1.90	pCi/g	08/26/21 10:56	09/18/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*67.8*		*40 - 110*	*08/26/21 10:56*	*09/18/21 20:33*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.13	U	1.50	1.50	5.00	2.71	pCi/g	08/29/21 20:28	09/16/21 01:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.8*		*30 - 110*	*08/29/21 20:28*	*09/16/21 01:40*	*1*

Client Sample ID: FSS-012-081121

Lab Sample ID: 160-43079-12
Date Collected: 08/11/21 13:30
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 93.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**4.3**		0.33	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 04:53	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/01/21 15:10	09/01/21 18:10	1

Client Sample ID: FSS-013-081221

Lab Sample ID: 160-43079-13
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0888	U	0.204	0.204	3.00	0.357	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*74.7*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*93.8*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Client Sample ID: FSS-013-081221

Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-13

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0547	U	0.225	0.225	1.00	0.405	pCi/g	08/27/21 08:28	09/01/21 14:06	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00219	U	0.00429	0.00430	1.00	0.0424	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00219	U	0.00430	0.00430	1.00	0.0424	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.0*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	**0.597**		0.146	0.154	1.00	0.0518	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235	**0.0576**		0.0505	0.0507	1.00	0.0345	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.573**		0.143	0.150	1.00	0.0277	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.9*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.392	U	0.854	0.855	5.00	1.46	pCi/g	09/09/21 09:41	09/10/21 21:28	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.138	U	0.120	0.120		0.142	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Americium-241	-0.0499	U	0.125	0.125		0.215	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Bismuth-212	-0.482	U	0.784	0.786		1.34	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Bismuth-214	**0.355**		0.0968	0.103		0.0905	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Cesium-137	**0.150**		0.0448	0.0473		0.0304	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Cobalt-60	0.00377	U	0.0105	0.0105		0.0777	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Europium-152	0.00949	U	0.0265	0.0266		0.144	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Europium-154	0.0664	U	0.0465	0.0470		0.0994	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Europium-155	-0.000494	U	0.00122	0.00122		0.357	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Lead-212	**0.144**		0.0444	0.0480		0.0439	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Lead-214	**0.372**		0.0832	0.0914		0.113	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Potassium-40	**5.02**		0.907	1.04		0.314	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Radium-226	**0.355**		0.0968	0.103	1.00	0.0905	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Radium-228	0.138	U	0.120	0.120		0.142	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Sodium-22	0.00543	U	0.0284	0.0284		0.0562	pCi/g	08/20/21 09:48	09/11/21 07:05	1
Zinc-65	-0.109	U	0.165	0.165		0.280	pCi/g	08/20/21 09:48	09/11/21 07:05	1

Client Sample ID: FSS-013-081221

Lab Sample ID: 160-43079-13
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.404	U	0.786	0.787	5.00	1.35	pCi/g	08/26/21 10:56	09/18/21 21:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*92.6*		*40 - 110*	*08/26/21 10:56*	*09/18/21 21:40*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.167	U	1.32	1.32	5.00	2.37	pCi/g	08/31/21 14:29	09/15/21 18:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.0*		*30 - 110*	*08/31/21 14:29*	*09/15/21 18:25*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			08/19/21 16:11	1

Client Sample ID: FSS-013-081221

Lab Sample ID: 160-43079-13
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 98.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.4**		0.41	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 04:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**10**	**J**	19	6.0	ug/Kg	☼	09/01/21 15:10	09/01/21 18:13	1

Client Sample ID: FSS-014-081221

Lab Sample ID: 160-43079-14
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.138	U	0.205	0.206	3.00	0.352	pCi/g	08/27/21 13:56	09/07/21 17:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.0*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*
Y Carrier	*93.1*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:21*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.211	U	0.246	0.246	1.00	0.414	pCi/g	08/27/21 08:28	09/01/21 14:29	1

Client Sample ID: FSS-014-081221

Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-14

Matrix: Solid

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00946	U	0.00927	0.00930	1.00	0.0632	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00237	U	0.00464	0.00464	1.00	0.0458	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.4*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00281	U	0.00551	0.00552	1.00	0.0545	pCi/g	08/29/21 20:35	09/08/21 14:04	1
Uranium-238	**0.142**		0.0736	0.0745	1.00	0.0642	pCi/g	08/29/21 20:35	09/08/21 14:04	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*90.9*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:04*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0466	U	0.766	0.766	5.00	1.35	pCi/g	09/09/21 09:41	09/10/21 21:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.140	U	0.233	0.233		0.385	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Americium-241	-0.0588	U	0.180	0.180		0.308	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Bismuth-212	-0.535	U	0.839	0.840		1.43	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Bismuth-214	**0.340**		0.121	0.126		0.109	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Cesium-137	-0.000289	U	0.0624	0.0624		0.0470	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Cobalt-60	0.0253	U	0.0150	0.0152		0.0354	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Europium-152	0.143	U	0.195	0.196		0.318	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Europium-154	**0.119**		0.0624	0.0636		0.113	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Europium-155	-0.0249	U	0.167	0.167		0.418	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Lead-212	**0.277**		0.0870	0.0938		0.117	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Lead-214	**0.334**		0.0959	0.102		0.0767	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Potassium-40	**3.50**		0.889	0.956		0.745	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Radium-226	**0.340**		0.121	0.126	1.00	0.109	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Sodium-22	-0.0658	U	0.0747	0.0750		0.124	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Thorium-232	0.140	U	0.233	0.233		0.385	pCi/g	08/18/21 14:03	09/11/21 20:20	1
Zinc-65	-0.00460	U	0.121	0.121		0.252	pCi/g	08/18/21 14:03	09/11/21 20:20	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.463	U	0.865	0.867	5.00	1.49	pCi/g	08/26/21 10:56	09/18/21 22:46	1

Client Sample ID: FSS-014-081221

Lab Sample ID: 160-43079-14
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	85.9		40 - 110	08/26/21 10:56	09/18/21 22:46	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.19	U	1.48	1.49	5.00	2.67	pCi/g	08/29/21 20:28	09/16/21 02:46	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	75.4		30 - 110	08/29/21 20:28	09/16/21 02:46	1

Client Sample ID: FSS-014-081221

Lab Sample ID: 160-43079-14
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 95.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.6		0.35	0.016	mg/Kg	☼	09/07/21 07:45	09/08/21 05:00	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/01/21 15:10	09/01/21 18:20	1

Client Sample ID: FSS-015-081221

Lab Sample ID: 160-43079-15
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.101	U	0.175	0.175	3.00	0.303	pCi/g	08/27/21 13:56	09/07/21 17:24	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	84.0		40 - 110	08/27/21 13:56	09/07/21 17:24	1
Y Carrier	95.7		40 - 110	08/27/21 13:56	09/07/21 17:24	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0524	U	0.216	0.216	1.00	0.409	pCi/g	08/27/21 08:28	09/01/21 14:51	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00433	U	0.0180	0.0180	1.00	0.0485	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.00650	U	0.0258	0.0258	1.00	0.0616	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	75.2		30 - 110	08/29/21 18:19	09/09/21 21:38	1

Client Sample ID: FSS-015-081221

Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-15

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00257	U	0.00505	0.00505	1.00	0.0498	pCi/g	08/29/21 20:35	09/08/21 14:04	1
Uranium-238	**0.147**		0.0711	0.0721	1.00	0.0587	pCi/g	08/29/21 20:35	09/08/21 14:04	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.5*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:04*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.553	U	0.896	0.898	5.00	1.52	pCi/g	09/09/21 09:41	09/10/21 22:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.462**		0.114	0.123		0.0691	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Americium-241	-0.0265	U	0.114	0.114		0.197	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Bismuth-212	0.242	U	0.400	0.401		0.692	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Bismuth-214	**0.281**		0.0910	0.0954		0.0909	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Cesium-137	-0.00473	U	0.0415	0.0415		0.0756	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Cobalt-60	0.0257	U	0.0190	0.0192		0.0270	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Europium-152	0.0414	U	0.0552	0.0553		0.0932	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Europium-154	0.0764	U	0.0529	0.0535		0.0795	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Europium-155	0.0424	U	0.108	0.108		0.327	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Lead-212	**0.359**		0.0618	0.0768		0.0460	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Lead-214	**0.253**		0.0690	0.0737		0.0642	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Potassium-40	**3.37**		0.692	0.770		0.273	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Radium-226	**0.281**		0.0910	0.0954	1.00	0.0909	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Sodium-22	0.000	U	0.0139	0.0139		0.0330	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Thorium-232	**0.462**		0.114	0.123		0.0691	pCi/g	08/18/21 14:03	09/11/21 20:23	1
Zinc-65	-0.000974	U	0.0960	0.0960		0.178	pCi/g	08/18/21 14:03	09/11/21 20:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0979	U	0.945	0.945	5.00	1.68	pCi/g	08/26/21 10:56	09/18/21 23:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*76.8*		*40 - 110*	*08/26/21 10:56*	*09/18/21 23:52*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.971	U	1.46	1.46	5.00	2.63	pCi/g	08/29/21 20:28	09/16/21 03:52	1

Client Sample ID: FSS-015-081221
Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-15
Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	75.2		30 - 110	08/29/21 20:28	09/16/21 03:52	1

Client Sample ID: FSS-015-081221
Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-15
Matrix: Solid
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.5**		0.38	0.017	mg/Kg	☼	09/07/21 07:45	09/08/21 05:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/01/21 15:10	09/01/21 18:23	1

Client Sample ID: FSS-016-081221
Date Collected: 08/12/21 08:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-16
Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0820	U	0.177	0.177	3.00	0.310	pCi/g	08/27/21 13:56	09/07/21 17:24	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.9		40 - 110	08/27/21 13:56	09/07/21 17:24	1
Y Carrier	93.8		40 - 110	08/27/21 13:56	09/07/21 17:24	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.204	U	0.241	0.242	1.00	0.404	pCi/g	08/27/21 08:28	09/01/21 15:14	1

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00478	U	0.0303	0.0303	1.00	0.0842	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00717	U	0.00812	0.00814	1.00	0.0591	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	67.8		30 - 110	08/29/21 18:19	09/09/21 21:38	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.000	U	0.00552	0.00552	1.00	0.0338	pCi/g	08/29/21 20:35	09/09/21 12:16	1
Uranium-238	**0.108**		0.0613	0.0619	1.00	0.0271	pCi/g	08/29/21 20:35	09/09/21 12:16	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	70.9		30 - 110	08/29/21 20:35	09/09/21 12:16	1

Client Sample ID: FSS-016-081221

Lab Sample ID: 160-43079-16
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.587	U	0.856	0.859	5.00	1.45	pCi/g	09/09/21 09:41	09/10/21 22:36	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.425**		0.124	0.132		0.126	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Americium-241	0.0260	U	0.122	0.122		0.212	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Bismuth-212	-0.0207	U	0.366	0.366		0.693	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Bismuth-214	**0.245**		0.0903	0.0936		0.0980	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Cesium-137	-0.0183	U	0.0591	0.0591		0.104	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Cobalt-60	0.000	U	0.0181	0.0181		0.0278	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Europium-152	-0.0522	U	0.0928	0.0930		0.158	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Europium-154	0.0507	U	0.0888	0.0890		0.101	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Europium-155	0.0257	U	0.139	0.139		0.240	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Lead-212	**0.360**		0.0700	0.0836		0.0722	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Lead-214	**0.269**		0.0729	0.0779		0.0661	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Potassium-40	**4.29**		0.851	0.954		0.611	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Radium-226	**0.245**		0.0903	0.0936	1.00	0.0980	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Sodium-22	-0.0461	U	0.0543	0.0545		0.0905	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Thorium-232	**0.425**		0.124	0.132		0.126	pCi/g	08/18/21 14:03	09/13/21 15:00	1
Zinc-65	-0.0171	U	0.138	0.138		0.247	pCi/g	08/18/21 14:03	09/13/21 15:00	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0726	U	1.03	1.03	5.00	1.82	pCi/g	08/26/21 10:56	09/19/21 01:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*79.9*		*40 - 110*	*08/26/21 10:56*	*09/19/21 01:01*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.85	U	1.52	1.53	5.00	2.81	pCi/g	08/29/21 20:28	09/16/21 04:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.8*		*30 - 110*	*08/29/21 20:28*	*09/16/21 04:59*	*1*

Client Sample ID: FSS-016-081221

Lab Sample ID: 160-43079-16
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.96**		0.40	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 05:07	1

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-43079-1
Project/Site: BNL Decommissioning Project

Client Sample ID: FSS-016-081221
Lab Sample ID: 160-43079-16
Date Collected: 08/12/21 08:00
Matrix: Solid
Date Received: 08/13/21 08:45
Percent Solids: 96.8

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/01/21 15:10	09/01/21 18:25	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-548182/1-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548182

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0584	J	0.40	0.018	mg/Kg		09/07/21 07:45	09/08/21 03:36	1

Lab Sample ID: LCS 280-548182/2-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	17.8		mg/Kg		89	84 - 118

Lab Sample ID: LCSD 280-548182/3-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	20.0	17.2		mg/Kg		86	84 - 118	3	20

Lab Sample ID: 160-43079-1 MS
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: FSS-001-081121
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	14	J1	17.6	25.6	J1	mg/Kg	☼	68	84 - 118

Lab Sample ID: 160-43079-1 MSD
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: FSS-001-081121
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	14	J1	16.4	37.7	J1	mg/Kg	☼	147	84 - 118	38	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-548022/1-A
Matrix: Solid
Analysis Batch: 548666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548022

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/01/21 15:10	09/02/21 13:43	1

Lab Sample ID: LCS 280-548022/2-A
Matrix: Solid
Analysis Batch: 548666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548022

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	337		ug/Kg		101	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-548022/3-A
Matrix: Solid
Analysis Batch: 548666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548022

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			333	343		ug/Kg		103	80 - 124	2	20

Lab Sample ID: 160-43079-1 MS
Matrix: Solid
Analysis Batch: 548666

Client Sample ID: FSS-001-081121
Prep Type: Total/NA
Prep Batch: 548022

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	15	U	380	396		ug/Kg	☼	104	80 - 124		

Lab Sample ID: 160-43079-1 MSD
Matrix: Solid
Analysis Batch: 548666

Client Sample ID: FSS-001-081121
Prep Type: Total/NA
Prep Batch: 548022

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	348	351		ug/Kg	☼	101	80 - 124	12	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-524352/23-A
Matrix: Solid
Analysis Batch: 525785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524352

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.009816	U	0.147	0.147	3.00	0.273	pCi/g	08/27/21 13:56	09/07/21 17:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.9*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*
Y Carrier	*93.1*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*

Lab Sample ID: LCS 160-524352/1-A
Matrix: Solid
Analysis Batch: 525699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524352

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.63	7.574		0.804	3.00	0.284	pCi/g	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*86.9*		*40 - 110*
Y Carrier	*92.7*		*40 - 110*

Lab Sample ID: 160-43079-2 DU
Matrix: Solid
Analysis Batch: 525699

Client Sample ID: FSS-002-081121
Prep Type: Total/NA
Prep Batch: 524352

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.117	U		0.8691		0.291	3.00	0.399	pCi/g			4.41	3

Method: 905 - Strontium-90 (GFPC) (Continued)

Carrier	DU %Yield	DU Qualifier	Limits
Sr Carrier	77.8		40 - 110
Y Carrier	93.8		40 - 110

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-524308/1-A
Matrix: Solid
Analysis Batch: 525218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524308

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.3495	U	0.253	0.255	1.00	0.399	pCi/g	08/27/21 08:28	09/01/21 08:49	1

Lab Sample ID: LCS 160-524308/2-A
Matrix: Solid
Analysis Batch: 525218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524308

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.63	7.425		0.914	1.00	0.420	pCi/g	97	79 - 125		

Lab Sample ID: 160-43079-15 MS
Matrix: Solid
Analysis Batch: 525218

Client Sample ID: FSS-015-081221
Prep Type: Total/NA
Prep Batch: 524308

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.0524	U	7.53	6.999		0.872	1.00	0.413	pCi/g	93	78 - 122		

Lab Sample ID: 160-43079-16 DU
Matrix: Solid
Analysis Batch: 525218

Client Sample ID: FSS-016-081221
Prep Type: Total/NA
Prep Batch: 524308

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.204	U		0.04912	U	0.232	1.00	0.419	pCi/g			0.91	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-524626/1-A
Matrix: Solid
Analysis Batch: 525927

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524626

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	-0.005101	U	0.0394	0.0394	1.00	0.101	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-235	-0.02857	U	0.0187	0.0188	1.00	0.108	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	-0.005091	U	0.00706	0.00707	1.00	0.0570	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	68.5		30 - 110	08/29/21 20:35	09/08/21 13:49	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-524626/2-A
Matrix: Solid
Analysis Batch: 525929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524626

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-234	6.37	6.892		0.784	1.00	0.0826	pCi/g	108	84 - 120
Uranium-238	6.51	6.673		0.764	1.00	0.0781	pCi/g	102	82 - 122

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*64.9*		*30 - 110*

Lab Sample ID: 160-43079-2 DU
Matrix: Solid
Analysis Batch: 525931

Client Sample ID: FSS-002-081121
Prep Type: Total/NA
Prep Batch: 524626

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-234	0.237		0.1539		0.0892	1.00	0.102	pCi/g	1.06	3
Uranium-235	-0.00468	U	0.0000	U	0.00615	1.00	0.0377	pCi/g	0.83	3
Uranium-238	0.113		0.1359		0.0750	1.00	0.0564	pCi/g	0.39	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*62.2*		*30 - 110*

Lab Sample ID: MB 160-524999/1-A
Matrix: Solid
Analysis Batch: 526333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524999

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-234	0.01627	U	0.0288	0.0288	1.00	0.0543	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235	0.007594	U	0.0205	0.0205	1.00	0.0490	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	-0.002030	U	0.0182	0.0182	1.00	0.0578	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*102*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Lab Sample ID: LCS 160-524999/2-A
Matrix: Solid
Analysis Batch: 526334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524999

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-234	6.37	5.631		0.629	1.00	0.0627	pCi/g	88	84 - 120
Uranium-238	6.51	6.623		0.714	1.00	0.0593	pCi/g	102	82 - 122

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*95.0*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-D-6-L DU
Matrix: Solid
Analysis Batch: 526361

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524999

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-234	0.372			0.2026		0.0942	1.00	0.0651	pCi/g			2.13	3
Uranium-235	-0.00297	U		0.01964	U	0.0375	1.00	0.0734	pCi/g			1.17	3
Uranium-238	0.248			0.1549		0.0809	1.00	0.0508	pCi/g			1.44	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*66.2*		*30 - 110*

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Lab Sample ID: MB 160-524624/1-A
Matrix: Solid
Analysis Batch: 526121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524624

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.002427	U	0.00476	0.00476	1.00	0.0470	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.0000	U	0.00476	0.00476	1.00	0.0291	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.8*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Lab Sample ID: LCS 160-524624/2-A
Matrix: Solid
Analysis Batch: 526122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524624

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.825		0.756	1.00	0.273	pCi/g	112	80 - 125		
Plutonium-239/240			5.28	5.892		0.768	1.00	0.322	pCi/g	112	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*50.4*		*30 - 110*

Lab Sample ID: 160-43079-2 DU
Matrix: Solid
Analysis Batch: 526124

Client Sample ID: FSS-002-081121
Prep Type: Total/NA
Prep Batch: 524624

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.00720	U		0.0000	U	0.00503	1.00	0.0308	pCi/g			1.26	3
Plutonium-239/240	0.00721	U		0.0000	U	0.00503	1.00	0.0308	pCi/g			0.46	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*62.9*		*30 - 110*

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec (Continued)

Lab Sample ID: MB 160-524992/1-A
Matrix: Solid
Analysis Batch: 526299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524992

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.004118	U	0.00571	0.00572	1.00	0.0461	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.008245	U	0.00808	0.00811	1.00	0.0551	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Lab Sample ID: LCS 160-524992/2-A
Matrix: Solid
Analysis Batch: 526300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524992

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.059		0.571	1.00	0.0555	pCi/g	97	80 - 125		
Plutonium-239/240			5.28	5.285		0.590	1.00	0.0235	pCi/g	100	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.1*		*30 - 110*

Lab Sample ID: 160-43124-D-6-F DU
Matrix: Solid
Analysis Batch: 526296

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524992

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0175	U		0.007388	U	0.0199	1.00	0.0477	pCi/g			0.48	3
Plutonium-239/240	-0.00219	U		-0.00493 0	U	0.00684	1.00	0.0552	pCi/g			0.66	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*79.8*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-526059/1-A
Matrix: Solid
Analysis Batch: 526423

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526059

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.6982	U	0.962	0.965	5.00	1.63	pCi/g	09/09/21 09:41	09/10/21 15:49	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-526059/2-A
Matrix: Solid
Analysis Batch: 526423

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526059

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.89		9.35	5.00	1.61	pCi/g	98	75 - 125		

Lab Sample ID: 160-43079-3 MS
Matrix: Solid
Analysis Batch: 526423

Client Sample ID: FSS-003-081121
Prep Type: Total/NA
Prep Batch: 526059

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.289	U	74.0	75.08		8.44	5.00	1.39	pCi/g	101	29 - 128		

Lab Sample ID: 160-43079-2 DU
Matrix: Solid
Analysis Batch: 526423

Client Sample ID: FSS-002-081121
Prep Type: Total/NA
Prep Batch: 526059

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.491	U		0.2938	U	0.815	5.00	1.41	pCi/g			0.33	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-523157/1-A
Matrix: Solid
Analysis Batch: 526435

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523157

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.02610	U	0.0798	0.0798		0.117	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Americium-241	0.05318	U	0.0693	0.0695		0.117	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Bismuth-212	0.0000	U	0.138	0.138		0.868	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Bismuth-214	-0.03436	U	0.0898	0.0898		0.277	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Cesium-137	0.0000	U	0.0159	0.0159		0.0588	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Cobalt-60	0.0000	U	0.0127	0.0127		0.0478	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Europium-152	0.09179		0.0542	0.0551		0.0741	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Europium-154	0.01123	U	0.0186	0.0186		0.0326	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Europium-155	-0.004667	U	0.0101	0.0102		0.279	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Lead-212	0.005607	U	0.0663	0.0663		0.119	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Lead-214	0.01165	U	0.116	0.116		0.206	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Potassium-40	0.3615	U	0.468	0.469		0.758	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Radium-226	-0.03436	U	0.0898	0.0898	1.00	0.277	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Sodium-22	0.0000	U	0.0244	0.0244		0.0459	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Thorium-232	0.02610	U	0.0798	0.0798		0.117	pCi/g	08/18/21 14:03	09/11/21 18:53	1
Zinc-65	-0.05409	U	0.139	0.139		0.340	pCi/g	08/18/21 14:03	09/11/21 18:53	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-523157/2-A
Matrix: Solid
Analysis Batch: 526434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523157

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	96.18		9.89		1.06	pCi/g	100	87 - 116
Cesium-137	26.3	25.19		2.62		0.138	pCi/g	96	87 - 120
Cobalt-60	8.58	8.145		0.844		0.106	pCi/g	95	87 - 115

Lab Sample ID: 160-43079-16 DU
Matrix: Solid
Analysis Batch: 526602

Client Sample ID: FSS-016-081221
Prep Type: Total/NA
Prep Batch: 523157

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.425		0.4043		0.120		0.0885	pCi/g	0.23	2
Americium-241	0.0260	U	0.06047	U	0.151		0.259	pCi/g	0.35	2
Bismuth-212	-0.0207	U	0.3617	U	0.784		1.36	pCi/g	0.87	2
Bismuth-214	0.245		0.2620		0.120		0.129	pCi/g	0.22	2
Cesium-137	-0.0183	U	0.01540	U	0.0347		0.0619	pCi/g	0.96	2
Cobalt-60	0.000	U	0.0000	U	0.00914		0.0344	pCi/g	0	2
Europium-152	-0.0522	U	0.08224	U	0.172		0.152	pCi/g	1.35	2
Europium-154	0.0507	U	0.06075	U	0.0912		0.102	pCi/g	0.15	2
Europium-155	0.0257	U	-0.07745	U	0.153		0.358	pCi/g	0.98	2
Lead-212	0.360		0.3242		0.100		0.0949	pCi/g	0.54	2
Lead-214	0.269		0.2377		0.114		0.164	pCi/g	0.44	2
Potassium-40	4.29		3.970		1.00		0.725	pCi/g	0.45	2
Radium-226	0.245		0.2620		0.120	1.00	0.129	pCi/g	0.22	2
Sodium-22	-0.0461	U	-0.05720	U	0.0660		0.109	pCi/g	0.26	2
Thorium-232	0.425		0.4043		0.120		0.0885	pCi/g	0.23	2
Zinc-65	-0.0171	U	-0.004475	U	0.106		0.266	pCi/g	0.14	2

Lab Sample ID: MB 160-523357/1-A
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523357

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.04812	U	0.166	0.166		0.219	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Americium-241	0.02933	U	0.0712	0.0712		0.124	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Bismuth-212	0.02701	U	0.498	0.498		0.940	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Bismuth-214	-0.06055	U	0.127	0.128		0.251	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Cesium-137	-0.01892	U	0.0665	0.0665		0.118	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Cobalt-60	0.0006647	U	0.00650	0.00650		0.0678	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Europium-152	0.001162	U	0.00211	0.00212		0.119	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Europium-154	0.06079	U	0.0377	0.0382		0.0751	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Europium-155	0.002800	U	0.0530	0.0530		0.253	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Lead-212	0.01849	U	0.0537	0.0538		0.0954	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Lead-214	0.003199	U	0.00897	0.00897		0.171	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Potassium-40	-0.2086	U	0.677	0.677		1.01	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Radium-226	-0.06055	U	0.127	0.128	1.00	0.251	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Radium-228	0.04812	U	0.166	0.166		0.219	pCi/g	08/20/21 09:48	09/11/21 08:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-523357/1-A
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523357

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	0.0000	U	0.00929	0.00929		0.0349	pCi/g	08/20/21 09:48	09/11/21 08:13	1
Zinc-65	0.0000	U	0.0165	0.0165		0.170	pCi/g	08/20/21 09:48	09/11/21 08:13	1

Lab Sample ID: LCS 160-523357/2-A
Matrix: Solid
Analysis Batch: 526434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523357

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	97.85		10.1		1.00	pCi/g	102	87 - 116		
Cesium-137			26.3	25.39		2.65		0.160	pCi/g	97	87 - 120		
Cobalt-60			8.58	8.135		0.843		0.0909	pCi/g	95	87 - 115		

Lab Sample ID: 160-43079-13 DU
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: FSS-013-081221
Prep Type: Total/NA
Prep Batch: 523357

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.138	U		0.09706	U	0.167		0.197	pCi/g			0.39	2
Americium-241	-0.0499	U		-0.05198	U	0.0733		0.203	pCi/g			0.03	2
Bismuth-212	-0.482	U		-0.4972	U	0.811		1.39	pCi/g			0.03	2
Bismuth-214	0.355			0.2986		0.105		0.105	pCi/g			0.76	2
Cesium-137	0.150			0.04284	U	0.0701		0.120	pCi/g			2.48	2
Cobalt-60	0.00377	U		0.001473	U	0.0486		0.0610	pCi/g			0.09	2
Europium-152	0.00949	U		0.07014	U	0.0612		0.136	pCi/g			1.78	2
Europium-154	0.0664	U		0.04342	U	0.0572		0.0889	pCi/g			0.61	2
Europium-155	-0.00049 4	U		-0.00102 4	U	0.0863		0.465	pCi/g			0.01	2
Lead-212	0.144			0.0000	U	0.0627		0.178	pCi/g			3.56	2
Lead-214	0.372			0.3707		0.0965		0.0930	pCi/g			0.02	2
Potassium-40	5.02			6.191		1.26		0.716	pCi/g			1.40	2
Radium-226	0.355			0.2986		0.105	1.00	0.105	pCi/g			0.76	2
Radium-228	0.138	U		0.09706	U	0.167		0.197	pCi/g			0.39	2
Sodium-22	0.00543	U		-0.00995 4	U	0.0418		0.0785	pCi/g			0.60	2
Zinc-65	-0.109	U		0.06124	U	0.0801		0.134	pCi/g			1.82	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-524237/1-A
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524237

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.5258	U	1.24	1.24	5.00	2.21	pCi/g	08/26/21 10:56	09/18/21 06:13	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: MB 160-524237/1-A
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524237

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	59.8		40 - 110	08/26/21 10:56	09/18/21 06:13	1

Lab Sample ID: LCS 160-524237/2-A
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524237

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	19.63		2.59	5.00	1.67	pCi/g	91	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni	78.7		40 - 110

Lab Sample ID: 160-43079-7 DU
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: FSS-007-081121
Prep Type: Total/NA
Prep Batch: 524237

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.150	U		-0.2638	U	0.922	5.00	1.67	pCi/g			0.64	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni	80.1		40 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-524625/1-A
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524625

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.9155	U	1.61	1.61	5.00	2.91	pCi/g	08/29/21 20:28	09/15/21 13:31	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	73.8		30 - 110	08/29/21 20:28	09/15/21 13:31	1

Lab Sample ID: LCS 160-524625/2-A
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524625

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	21.72		3.67	5.00	3.85	pCi/g	109	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	50.4		30 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: 160-43079-2 DU
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: FSS-002-081121
Prep Type: Total/NA
Prep Batch: 524625

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-1.80	U		-1.278	U	1.64	5.00	2.93	pCi/g			0.37	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*62.9*		*30 - 110*

Lab Sample ID: MB 160-525000/1-A
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525000

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.2839	U	1.08	1.08	5.00	1.94	pCi/g	08/31/21 14:29	09/15/21 12:54	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*08/31/21 14:29*	*09/15/21 12:54*	*1*

Lab Sample ID: LCS 160-525000/2-A
Matrix: Solid
Analysis Batch: 527690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525000

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	19.34		2.53	5.00	1.96	pCi/g	97	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.1*		*30 - 110*

Lab Sample ID: 160-43124-D-6-J DU
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525000

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.385	U		-0.1104	U	1.31	5.00	2.34	pCi/g			0.32	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*79.8*		*30 - 110*

Metals

Prep Batch: 548022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	7471B	
160-43079-2	FSS-002-081121	Total/NA	Solid	7471B	
160-43079-3	FSS-003-081121	Total/NA	Solid	7471B	
160-43079-4	FSS-004-081121	Total/NA	Solid	7471B	
160-43079-5	FSS-005-081121	Total/NA	Solid	7471B	
160-43079-6	FSS-006-081121	Total/NA	Solid	7471B	
160-43079-7	FSS-007-081121	Total/NA	Solid	7471B	
160-43079-8	FSS-008-081121	Total/NA	Solid	7471B	
160-43079-9	FSS-009-081121	Total/NA	Solid	7471B	
160-43079-10	FSS-010-081121	Total/NA	Solid	7471B	
160-43079-11	FSS-011-081121	Total/NA	Solid	7471B	
160-43079-12	FSS-012-081121	Total/NA	Solid	7471B	
160-43079-13	FSS-013-081221	Total/NA	Solid	7471B	
160-43079-14	FSS-014-081221	Total/NA	Solid	7471B	
160-43079-15	FSS-015-081221	Total/NA	Solid	7471B	
160-43079-16	FSS-016-081221	Total/NA	Solid	7471B	
MB 280-548022/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-548022/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-548022/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43079-1 MS	FSS-001-081121	Total/NA	Solid	7471B	
160-43079-1 MSD	FSS-001-081121	Total/NA	Solid	7471B	

Prep Batch: 548182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	3050B	
160-43079-2	FSS-002-081121	Total/NA	Solid	3050B	
160-43079-3	FSS-003-081121	Total/NA	Solid	3050B	
160-43079-4	FSS-004-081121	Total/NA	Solid	3050B	
160-43079-5	FSS-005-081121	Total/NA	Solid	3050B	
160-43079-6	FSS-006-081121	Total/NA	Solid	3050B	
160-43079-7	FSS-007-081121	Total/NA	Solid	3050B	
160-43079-8	FSS-008-081121	Total/NA	Solid	3050B	
160-43079-9	FSS-009-081121	Total/NA	Solid	3050B	
160-43079-10	FSS-010-081121	Total/NA	Solid	3050B	
160-43079-11	FSS-011-081121	Total/NA	Solid	3050B	
160-43079-12	FSS-012-081121	Total/NA	Solid	3050B	
160-43079-13	FSS-013-081221	Total/NA	Solid	3050B	
160-43079-14	FSS-014-081221	Total/NA	Solid	3050B	
160-43079-15	FSS-015-081221	Total/NA	Solid	3050B	
160-43079-16	FSS-016-081221	Total/NA	Solid	3050B	
MB 280-548182/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548182/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 280-548182/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
160-43079-1 MS	FSS-001-081121	Total/NA	Solid	3050B	
160-43079-1 MSD	FSS-001-081121	Total/NA	Solid	3050B	

Analysis Batch: 548666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	7471B	548022
160-43079-2	FSS-002-081121	Total/NA	Solid	7471B	548022
160-43079-3	FSS-003-081121	Total/NA	Solid	7471B	548022

Metals (Continued)

Analysis Batch: 548666 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-4	FSS-004-081121	Total/NA	Solid	7471B	548022
160-43079-5	FSS-005-081121	Total/NA	Solid	7471B	548022
160-43079-6	FSS-006-081121	Total/NA	Solid	7471B	548022
160-43079-7	FSS-007-081121	Total/NA	Solid	7471B	548022
160-43079-8	FSS-008-081121	Total/NA	Solid	7471B	548022
160-43079-9	FSS-009-081121	Total/NA	Solid	7471B	548022
160-43079-10	FSS-010-081121	Total/NA	Solid	7471B	548022
160-43079-11	FSS-011-081121	Total/NA	Solid	7471B	548022
160-43079-12	FSS-012-081121	Total/NA	Solid	7471B	548022
160-43079-13	FSS-013-081221	Total/NA	Solid	7471B	548022
160-43079-14	FSS-014-081221	Total/NA	Solid	7471B	548022
160-43079-15	FSS-015-081221	Total/NA	Solid	7471B	548022
160-43079-16	FSS-016-081221	Total/NA	Solid	7471B	548022
MB 280-548022/1-A	Method Blank	Total/NA	Solid	7471B	548022
LCS 280-548022/2-A	Lab Control Sample	Total/NA	Solid	7471B	548022
LCSD 280-548022/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	548022
160-43079-1 MS	FSS-001-081121	Total/NA	Solid	7471B	548022
160-43079-1 MSD	FSS-001-081121	Total/NA	Solid	7471B	548022

Analysis Batch: 549084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	6020B	548182
160-43079-2	FSS-002-081121	Total/NA	Solid	6020B	548182
160-43079-3	FSS-003-081121	Total/NA	Solid	6020B	548182
160-43079-4	FSS-004-081121	Total/NA	Solid	6020B	548182
160-43079-5	FSS-005-081121	Total/NA	Solid	6020B	548182
160-43079-6	FSS-006-081121	Total/NA	Solid	6020B	548182
160-43079-7	FSS-007-081121	Total/NA	Solid	6020B	548182
160-43079-8	FSS-008-081121	Total/NA	Solid	6020B	548182
160-43079-9	FSS-009-081121	Total/NA	Solid	6020B	548182
160-43079-10	FSS-010-081121	Total/NA	Solid	6020B	548182
160-43079-11	FSS-011-081121	Total/NA	Solid	6020B	548182
160-43079-12	FSS-012-081121	Total/NA	Solid	6020B	548182
160-43079-13	FSS-013-081221	Total/NA	Solid	6020B	548182
160-43079-14	FSS-014-081221	Total/NA	Solid	6020B	548182
160-43079-15	FSS-015-081221	Total/NA	Solid	6020B	548182
160-43079-16	FSS-016-081221	Total/NA	Solid	6020B	548182
MB 280-548182/1-A	Method Blank	Total/NA	Solid	6020B	548182
LCS 280-548182/2-A	Lab Control Sample	Total/NA	Solid	6020B	548182
LCSD 280-548182/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	548182
160-43079-1 MS	FSS-001-081121	Total/NA	Solid	6020B	548182
160-43079-1 MSD	FSS-001-081121	Total/NA	Solid	6020B	548182

General Chemistry

Analysis Batch: 547683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	Moisture	
160-43079-2	FSS-002-081121	Total/NA	Solid	Moisture	
160-43079-3	FSS-003-081121	Total/NA	Solid	Moisture	
160-43079-4	FSS-004-081121	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 547683 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-5	FSS-005-081121	Total/NA	Solid	Moisture	
160-43079-6	FSS-006-081121	Total/NA	Solid	Moisture	
160-43079-7	FSS-007-081121	Total/NA	Solid	Moisture	
160-43079-8	FSS-008-081121	Total/NA	Solid	Moisture	
160-43079-9	FSS-009-081121	Total/NA	Solid	Moisture	
160-43079-10	FSS-010-081121	Total/NA	Solid	Moisture	
160-43079-11	FSS-011-081121	Total/NA	Solid	Moisture	
160-43079-12	FSS-012-081121	Total/NA	Solid	Moisture	
160-43079-13	FSS-013-081221	Total/NA	Solid	Moisture	
160-43079-14	FSS-014-081221	Total/NA	Solid	Moisture	
160-43079-15	FSS-015-081221	Total/NA	Solid	Moisture	
160-43079-16	FSS-016-081221	Total/NA	Solid	Moisture	
160-43079-8 DU	FSS-008-081121	Total/NA	Solid	Moisture	

Rad

Leach Batch: 522818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	Dry and Grind	
160-43079-3	FSS-003-081121	Total/NA	Solid	Dry and Grind	
160-43079-4	FSS-004-081121	Total/NA	Solid	Dry and Grind	
160-43079-7	FSS-007-081121	Total/NA	Solid	Dry and Grind	
160-43079-8	FSS-008-081121	Total/NA	Solid	Dry and Grind	
160-43079-10	FSS-010-081121	Total/NA	Solid	Dry and Grind	
160-43079-11	FSS-011-081121	Total/NA	Solid	Dry and Grind	
160-43079-12	FSS-012-081121	Total/NA	Solid	Dry and Grind	
160-43079-14	FSS-014-081221	Total/NA	Solid	Dry and Grind	
160-43079-15	FSS-015-081221	Total/NA	Solid	Dry and Grind	
160-43079-16	FSS-016-081221	Total/NA	Solid	Dry and Grind	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	Dry and Grind	
160-43079-7 DU	FSS-007-081121	Total/NA	Solid	Dry and Grind	
160-43079-16 DU	FSS-016-081221	Total/NA	Solid	Dry and Grind	

Prep Batch: 523157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-3	FSS-003-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-4	FSS-004-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-7	FSS-007-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-8	FSS-008-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-10	FSS-010-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-11	FSS-011-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-12	FSS-012-081121	Total/NA	Solid	Fill_Geo-21	522818
160-43079-14	FSS-014-081221	Total/NA	Solid	Fill_Geo-21	522818
160-43079-15	FSS-015-081221	Total/NA	Solid	Fill_Geo-21	522818
160-43079-16	FSS-016-081221	Total/NA	Solid	Fill_Geo-21	522818
MB 160-523157/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-523157/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43079-16 DU	FSS-016-081221	Total/NA	Solid	Fill_Geo-21	522818

Rad

Leach Batch: 523235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	Dry and Grind	
160-43079-3	FSS-003-081121	Total/NA	Solid	Dry and Grind	
160-43079-4	FSS-004-081121	Total/NA	Solid	Dry and Grind	
160-43079-7	FSS-007-081121	Total/NA	Solid	Dry and Grind	
160-43079-8	FSS-008-081121	Total/NA	Solid	Dry and Grind	
160-43079-10	FSS-010-081121	Total/NA	Solid	Dry and Grind	
160-43079-11	FSS-011-081121	Total/NA	Solid	Dry and Grind	
160-43079-12	FSS-012-081121	Total/NA	Solid	Dry and Grind	
160-43079-14	FSS-014-081221	Total/NA	Solid	Dry and Grind	
160-43079-15	FSS-015-081221	Total/NA	Solid	Dry and Grind	
160-43079-16	FSS-016-081221	Total/NA	Solid	Dry and Grind	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	Dry and Grind	

Leach Batch: 523281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-6	FSS-006-081121	Total/NA	Solid	Dry and Grind	

Prep Batch: 523357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	Fill_Geo-21	
160-43079-5	FSS-005-081121	Total/NA	Solid	Fill_Geo-21	
160-43079-9	FSS-009-081121	Total/NA	Solid	Fill_Geo-21	
160-43079-13	FSS-013-081221	Total/NA	Solid	Fill_Geo-21	
MB 160-523357/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-523357/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43079-13 DU	FSS-013-081221	Total/NA	Solid	Fill_Geo-21	

Leach Batch: 523723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-6-L DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-6-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 524237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-2	FSS-002-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-3	FSS-003-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-4	FSS-004-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-5	FSS-005-081121	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-7	FSS-007-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-8	FSS-008-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-9	FSS-009-081121	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-10	FSS-010-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-11	FSS-011-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-12	FSS-012-081121	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-13	FSS-013-081221	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-14	FSS-014-081221	Total/NA	Solid	Ext_Chrom_LSC	522818
160-43079-15	FSS-015-081221	Total/NA	Solid	Ext_Chrom_LSC	522818

Rad (Continued)

Prep Batch: 524237 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-16	FSS-016-081221	Total/NA	Solid	Ext_Chrom_LSC	522818
MB 160-524237/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-524237/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-7 DU	FSS-007-081121	Total/NA	Solid	Ext_Chrom_LSC	522818

Prep Batch: 524308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-2	FSS-002-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-3	FSS-003-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-4	FSS-004-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-5	FSS-005-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-6	FSS-006-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-7	FSS-007-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-8	FSS-008-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-9	FSS-009-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-10	FSS-010-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-11	FSS-011-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-12	FSS-012-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-13	FSS-013-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-14	FSS-014-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-15	FSS-015-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-16	FSS-016-081221	Total/NA	Solid	LSC_Dist_Susp	
MB 160-524308/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-524308/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43079-15 MS	FSS-015-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-16 DU	FSS-016-081221	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 524352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	DPS-7	
160-43079-2	FSS-002-081121	Total/NA	Solid	DPS-7	522818
160-43079-3	FSS-003-081121	Total/NA	Solid	DPS-7	522818
160-43079-4	FSS-004-081121	Total/NA	Solid	DPS-7	522818
160-43079-5	FSS-005-081121	Total/NA	Solid	DPS-7	
160-43079-7	FSS-007-081121	Total/NA	Solid	DPS-7	522818
160-43079-8	FSS-008-081121	Total/NA	Solid	DPS-7	522818
160-43079-9	FSS-009-081121	Total/NA	Solid	DPS-7	
160-43079-10	FSS-010-081121	Total/NA	Solid	DPS-7	522818
160-43079-11	FSS-011-081121	Total/NA	Solid	DPS-7	522818
160-43079-12	FSS-012-081121	Total/NA	Solid	DPS-7	522818
160-43079-13	FSS-013-081221	Total/NA	Solid	DPS-7	
160-43079-14	FSS-014-081221	Total/NA	Solid	DPS-7	522818
160-43079-15	FSS-015-081221	Total/NA	Solid	DPS-7	522818
160-43079-16	FSS-016-081221	Total/NA	Solid	DPS-7	522818
MB 160-524352/23-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-524352/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	DPS-7	522818

Rad

Prep Batch: 524624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	ExtChrom	523235
160-43079-3	FSS-003-081121	Total/NA	Solid	ExtChrom	523235
160-43079-4	FSS-004-081121	Total/NA	Solid	ExtChrom	523235
160-43079-6	FSS-006-081121	Total/NA	Solid	ExtChrom	523281
160-43079-7	FSS-007-081121	Total/NA	Solid	ExtChrom	523235
160-43079-8	FSS-008-081121	Total/NA	Solid	ExtChrom	523235
160-43079-10	FSS-010-081121	Total/NA	Solid	ExtChrom	523235
160-43079-11	FSS-011-081121	Total/NA	Solid	ExtChrom	523235
160-43079-12	FSS-012-081121	Total/NA	Solid	ExtChrom	523235
160-43079-14	FSS-014-081221	Total/NA	Solid	ExtChrom	523235
160-43079-15	FSS-015-081221	Total/NA	Solid	ExtChrom	523235
160-43079-16	FSS-016-081221	Total/NA	Solid	ExtChrom	523235
MB 160-524624/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524624/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	ExtChrom	523235

Prep Batch: 524625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	Leach_Precip	
160-43079-3	FSS-003-081121	Total/NA	Solid	Leach_Precip	
160-43079-4	FSS-004-081121	Total/NA	Solid	Leach_Precip	
160-43079-6	FSS-006-081121	Total/NA	Solid	Leach_Precip	
160-43079-7	FSS-007-081121	Total/NA	Solid	Leach_Precip	
160-43079-8	FSS-008-081121	Total/NA	Solid	Leach_Precip	
160-43079-10	FSS-010-081121	Total/NA	Solid	Leach_Precip	
160-43079-11	FSS-011-081121	Total/NA	Solid	Leach_Precip	
160-43079-12	FSS-012-081121	Total/NA	Solid	Leach_Precip	
160-43079-14	FSS-014-081221	Total/NA	Solid	Leach_Precip	
160-43079-15	FSS-015-081221	Total/NA	Solid	Leach_Precip	
160-43079-16	FSS-016-081221	Total/NA	Solid	Leach_Precip	
MB 160-524625/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-524625/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	Leach_Precip	

Prep Batch: 524626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-2	FSS-002-081121	Total/NA	Solid	ExtChrom	523235
160-43079-3	FSS-003-081121	Total/NA	Solid	ExtChrom	523235
160-43079-4	FSS-004-081121	Total/NA	Solid	ExtChrom	523235
160-43079-6	FSS-006-081121	Total/NA	Solid	ExtChrom	523281
160-43079-7	FSS-007-081121	Total/NA	Solid	ExtChrom	523235
160-43079-8	FSS-008-081121	Total/NA	Solid	ExtChrom	523235
160-43079-10	FSS-010-081121	Total/NA	Solid	ExtChrom	523235
160-43079-11	FSS-011-081121	Total/NA	Solid	ExtChrom	523235
160-43079-12	FSS-012-081121	Total/NA	Solid	ExtChrom	523235
160-43079-14	FSS-014-081221	Total/NA	Solid	ExtChrom	523235
160-43079-15	FSS-015-081221	Total/NA	Solid	ExtChrom	523235
160-43079-16	FSS-016-081221	Total/NA	Solid	ExtChrom	523235
MB 160-524626/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524626/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	ExtChrom	523235

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Rad

Prep Batch: 524992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	ExtChrom	
160-43079-5	FSS-005-081121	Total/NA	Solid	ExtChrom	
160-43079-9	FSS-009-081121	Total/NA	Solid	ExtChrom	
160-43079-13	FSS-013-081221	Total/NA	Solid	ExtChrom	
MB 160-524992/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524992/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-6-F DU	Duplicate	Total/NA	Solid	ExtChrom	524231

Prep Batch: 524999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	ExtChrom	
160-43079-5	FSS-005-081121	Total/NA	Solid	ExtChrom	
160-43079-9	FSS-009-081121	Total/NA	Solid	ExtChrom	
160-43079-13	FSS-013-081221	Total/NA	Solid	ExtChrom	
MB 160-524999/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524999/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-6-L DU	Duplicate	Total/NA	Solid	ExtChrom	523723

Prep Batch: 525000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	Leach_Precip	
160-43079-5	FSS-005-081121	Total/NA	Solid	Leach_Precip	
160-43079-9	FSS-009-081121	Total/NA	Solid	Leach_Precip	
160-43079-13	FSS-013-081221	Total/NA	Solid	Leach_Precip	
MB 160-525000/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525000/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-D-6-J DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 526059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-2	FSS-002-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-3	FSS-003-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-4	FSS-004-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-5	FSS-005-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-7	FSS-007-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-8	FSS-008-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-9	FSS-009-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-10	FSS-010-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-11	FSS-011-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-12	FSS-012-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-13	FSS-013-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-14	FSS-014-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-15	FSS-015-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43079-16	FSS-016-081221	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526059/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526059/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43079-3 MS	FSS-003-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43079-2 DU	FSS-002-081121	Total/NA	Solid	LSC_Dist_Susp	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Organic Prep

Analysis Batch: 523306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-1	FSS-001-081121	Total/NA	Solid	Part Size Red	
160-43079-5	FSS-005-081121	Total/NA	Solid	Part Size Red	
160-43079-9	FSS-009-081121	Total/NA	Solid	Part Size Red	
160-43079-13	FSS-013-081221	Total/NA	Solid	Part Size Red	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43079-1	FSS-001-081121	84.4	95.3
160-43079-2	FSS-002-081121	79.5	94.2
160-43079-2 DU	FSS-002-081121	77.8	93.8
160-43079-3	FSS-003-081121	84.3	94.6
160-43079-4	FSS-004-081121	82.0	93.1
160-43079-5	FSS-005-081121	89.7	94.2
160-43079-7	FSS-007-081121	83.2	96.1
160-43079-8	FSS-008-081121	78.4	94.2
160-43079-9	FSS-009-081121	72.3	94.2
160-43079-10	FSS-010-081121	82.9	95.0
160-43079-11	FSS-011-081121	83.7	92.3
160-43079-12	FSS-012-081121	79.5	93.5
160-43079-13	FSS-013-081221	74.7	93.8
160-43079-14	FSS-014-081221	79.0	93.1
160-43079-15	FSS-015-081221	84.0	95.7
160-43079-16	FSS-016-081221	78.9	93.8
LCS 160-524352/1-A	Lab Control Sample	86.9	92.7
MB 160-524352/23-A	Method Blank	89.9	93.1

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43079-1	FSS-001-081121	88.5
160-43079-2	FSS-002-081121	48.9
160-43079-2 DU	FSS-002-081121	62.9
160-43079-3	FSS-003-081121	69.8
160-43079-4	FSS-004-081121	79.7
160-43079-5	FSS-005-081121	101
160-43079-6	FSS-006-081121	89.9
160-43079-7	FSS-007-081121	63.3
160-43079-8	FSS-008-081121	54.7
160-43079-9	FSS-009-081121	87.1
160-43079-10	FSS-010-081121	70.8
160-43079-11	FSS-011-081121	71.2
160-43079-12	FSS-012-081121	73.8
160-43079-13	FSS-013-081221	78.0
160-43079-14	FSS-014-081221	75.4
160-43079-15	FSS-015-081221	75.2
160-43079-16	FSS-016-081221	67.8
160-43124-D-6-F DU	Duplicate	79.8
LCS 160-524624/2-A	Lab Control Sample	50.4
LCS 160-524992/2-A	Lab Control Sample	94.1
MB 160-524624/1-A	Method Blank	73.8

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43079-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Plutonium analysis by Alpha Spec (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
MB 160-524992/1-A	Method Blank	95.2							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	U-232 (30-110)							
160-43079-1	FSS-001-081121	77.0							
160-43079-2	FSS-002-081121	48.6							
160-43079-2 DU	FSS-002-081121	62.2							
160-43079-3	FSS-003-081121	60.5							
160-43079-4	FSS-004-081121	75.1							
160-43079-5	FSS-005-081121	71.2							
160-43079-6	FSS-006-081121	78.4							
160-43079-7	FSS-007-081121	75.1							
160-43079-8	FSS-008-081121	70.4							
160-43079-9	FSS-009-081121	87.2							
160-43079-10	FSS-010-081121	83.4							
160-43079-11	FSS-011-081121	65.7							
160-43079-12	FSS-012-081121	71.5							
160-43079-13	FSS-013-081221	71.9							
160-43079-14	FSS-014-081221	90.9							
160-43079-15	FSS-015-081221	91.5							
160-43079-16	FSS-016-081221	70.9							
160-43124-D-6-L DU	Duplicate	66.2							
LCS 160-524626/2-A	Lab Control Sample	64.9							
LCS 160-524999/2-A	Lab Control Sample	95.0							
MB 160-524626/1-A	Method Blank	68.5							
MB 160-524999/1-A	Method Blank	102							

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Ni (40-110)							
160-43079-1	FSS-001-081121	87.1							
160-43079-2	FSS-002-081121	88.8							
160-43079-3	FSS-003-081121	85.4							
160-43079-4	FSS-004-081121	85.0							
160-43079-5	FSS-005-081121	35.1 Q							
160-43079-7	FSS-007-081121	86.1							
160-43079-7 DU	FSS-007-081121	80.1							
160-43079-8	FSS-008-081121	84.9							
160-43079-9	FSS-009-081121	79.9							

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43079-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43079-10	FSS-010-081121	84.9						
160-43079-11	FSS-011-081121	86.1						
160-43079-12	FSS-012-081121	67.8						
160-43079-13	FSS-013-081221	92.6						
160-43079-14	FSS-014-081221	85.9						
160-43079-15	FSS-015-081221	76.8						
160-43079-16	FSS-016-081221	79.9						
LCS 160-524237/2-A	Lab Control Sample	78.7						
MB 160-524237/1-A	Method Blank	59.8						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43079-1	FSS-001-081121	88.5						
160-43079-2	FSS-002-081121	48.9						
160-43079-2 DU	FSS-002-081121	62.9						
160-43079-3	FSS-003-081121	69.8						
160-43079-4	FSS-004-081121	79.7						
160-43079-5	FSS-005-081121	101						
160-43079-6	FSS-006-081121	89.9						
160-43079-7	FSS-007-081121	63.3						
160-43079-8	FSS-008-081121	54.7						
160-43079-9	FSS-009-081121	87.1						
160-43079-10	FSS-010-081121	70.8						
160-43079-11	FSS-011-081121	71.2						
160-43079-12	FSS-012-081121	73.8						
160-43079-13	FSS-013-081221	78.0						
160-43079-14	FSS-014-081221	75.4						
160-43079-15	FSS-015-081221	75.2						
160-43079-16	FSS-016-081221	67.8						
160-43124-D-6-J DU	Duplicate	79.8						
LCS 160-524625/2-A	Lab Control Sample	50.4						
LCS 160-525000/2-A	Lab Control Sample	94.1						
MB 160-524625/1-A	Method Blank	73.8						
MB 160-525000/1-A	Method Blank	95.2						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-43079-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/19/2021 4:32:31 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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Job ID: 160-43079-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43079-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/13/2021 8:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.5º C, 23.4º C, 23.6º C and 24.7º C.

STRONTIUM-90 (GFPC)

Job ID: 160-43079-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Sample FSS-006-081121 (160-43079-6) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were prepared on 09/24/2021 and analyzed on 10/08/2021.

Preparation Batch 160-523700 and 160-528721:
The sample duplicate precision was outside control limits. Both the sample and duplicate results are less than the MDC; therefore, the data was not adversely affected: (160-43154-D-9-O) and (160-43154-D-9-P DU).

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

CARBON-14 BY LSC
Sample FSS-006-081121 (160-43079-6) was analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 10/12/2021 and analyzed on 10/15/2021.

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

RADIUM 226 (21 DAY INGROWTH)
Sample FSS-006-081121 (160-43079-6) was analyzed for Radium 226 (21 day ingrowth) in accordance with DOE GA-01-R. The samples were prepared on 09/23/2021 and analyzed on 10/15/2021.

Preparation Batch 160-528523:
The MB z-score for Eu-152 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-528523/1-A).

For samples FSS-006-081121 (160-43079-6), (LCS 160-528523/2-A), (MB 160-528523/1-A), and (160-43079-A-6-F DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Job ID: 160-43079-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

NICKEL 59/63

Sample FSS-006-081121 (160-43079-6) was analyzed for Nickel 59/63 in accordance with LSC-Nickel. The samples were prepared on 10/08/2021 and analyzed on 10/12/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-12-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___2___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-001-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt A SU-7D
FSS-002-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 0-6"
FSS-003-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 6" -12"
FSS-004-081121	11-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt A 18" -24
FSS-005-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt B SU-7D
FSS-006-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 0-6"
FSS-007-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 6" -12"
FSS-008-081121	11-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt B 18" -24
FSS-009-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Asphalt C SU-7D
FSS-010-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 0-6"
FSS-011-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 6" -12"
FSS-012-081121	11-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt C 18" -24

160-43079 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-12-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kominiarczuk	Company: ETA STL	Date/Time: AUG 13 2021 08:45
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-12-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-013-081221	12-Aug	8:00	C	S	4	N	N	1	1	1	1	1	1	1	1	Asphalt D SU-7D
FSS-014-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 0-6"
FSS-015-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 6" -12"
FSS-016-081221	12-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	Ground surface below Asphalt D 18" -24

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-12-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: Micha Konchinzyk	Company: ETA SRL	Date/Time: AUG 13 2021 08:45
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43079-2

Login Number: 43079
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43079-2
Project/Site: BNL Decommissioning Project

Qualifiers

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-2

Method	Method Description	Protocol	Laboratory
905	Strontium-90 (GFPC)	EPA	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
None = None
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

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

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43079-6	FSS-006-081121	Solid	08/11/21 11:00	08/13/21 08:45

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-2

Client Sample ID: FSS-006-081121

Date Collected: 08/11/21 11:00
Date Received: 08/13/21 08:45

Lab Sample ID: 160-43079-6

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.00484	U	0.238	0.238	3.00	0.437	pCi/g	09/24/21 10:45	10/08/21 20:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*57.2*		*40 - 110*	*09/24/21 10:45*	*10/08/21 20:24*	*1*
Y Carrier	*94.2*		*40 - 110*	*09/24/21 10:45*	*10/08/21 20:24*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.438	U	0.514	0.516	5.00	0.911	pCi/g	10/12/21 15:28	10/15/21 02:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.247**		0.155	0.157		0.154	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Americium-241	-0.0408	U	0.141	0.142		0.244	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Bismuth-212	-0.480	U	0.804	0.805		1.38	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Bismuth-214	**0.282**		0.0944	0.0987		0.0787	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Cesium-137	-0.0209	U	0.0609	0.0609		0.107	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Cobalt-60	0.0276	U	0.0221	0.0223		0.0339	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Europium-152	0.0816	U	0.114	0.114		0.149	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Europium-154	0.0660	U	0.125	0.125		0.105	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Europium-155	0.000	U	0.0873	0.0873		0.431	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Lead-212	**0.249**		0.0628	0.0702		0.0638	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Lead-214	**0.399**		0.0766	0.0867		0.0556	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Potassium-40	**6.83**		1.10	1.30		0.342	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Radium-226	**0.282**		0.0944	0.0987	1.00	0.0787	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Radium-228	**0.247**		0.155	0.157		0.154	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Sodium-22	0.0237	U	0.0356	0.0356		0.0613	pCi/g	09/23/21 10:12	10/15/21 18:16	1
Zinc-65	0.000	U	0.0819	0.0819		0.187	pCi/g	09/23/21 10:12	10/15/21 18:16	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.867	U	0.960	0.964	5.00	1.66	pCi/g	10/08/21 14:40	10/12/21 16:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.4*		*40 - 110*	*10/08/21 14:40*	*10/12/21 16:40*	*1*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-528721/11-A
Matrix: Solid
Analysis Batch: 530632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528721

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.004998	U	0.0292	0.0292	3.00	0.0549	pCi/g	09/24/21 10:45	10/08/21 20:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.2*		*40 - 110*	*09/24/21 10:45*	*10/08/21 20:25*	*1*
Y Carrier	*92.7*		*40 - 110*	*09/24/21 10:45*	*10/08/21 20:25*	*1*

Lab Sample ID: LCS 160-528721/1-A
Matrix: Solid
Analysis Batch: 530632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528721

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			1.52	1.370		0.155	3.00	0.0718	pCi/g	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*74.1*		*40 - 110*
Y Carrier	*89.3*		*40 - 110*

Lab Sample ID: 160-43154-D-9-P DU
Matrix: Solid
Analysis Batch: 530632

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 528721

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.0873	U		0.5617		0.335	3.00	0.507	pCi/g			3.14	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*42.5*		*40 - 110*
Y Carrier	*93.8*		*40 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-531311/1-A
Matrix: Solid
Analysis Batch: 531970

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 531311

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.4505	U	0.596	0.598	5.00	1.00	pCi/g	10/12/21 15:28	10/14/21 17:02	1

Lab Sample ID: LCS 160-531311/2-A
Matrix: Solid
Analysis Batch: 531970

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 531311

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	84.41		9.13	5.00	0.985	pCi/g	100	75 - 125		

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43079-6 MS
Matrix: Solid
Analysis Batch: 531970

Client Sample ID: FSS-006-081121
Prep Type: Total/NA
Prep Batch: 531311

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	-0.438	U	78.1	80.66		8.72	5.00	0.901	pCi/g	103	29 - 128

Lab Sample ID: 160-43587-B-1-B DU
Matrix: Solid
Analysis Batch: 531970

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 531311

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Carbon-14	0.0421	U	-0.05405	U	0.574	5.00	0.992	pCi/g	0.24	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-528523/1-A
Matrix: Solid
Analysis Batch: 531991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528523

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	-0.08891	U	0.304	0.304		0.370	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Americium-241	0.02042	U	0.124	0.125		0.220	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Bismuth-212	-0.4888	U	0.966	0.967		1.69	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Bismuth-214	-0.04333	U	0.100	0.101		0.345	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Cesium-137	-0.004553	U	0.0603	0.0603		0.128	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Cobalt-60	0.0000	U	0.0167	0.0167		0.0626	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Europium-152	0.1655		0.103	0.104		0.103	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Europium-154	0.01445	U	0.0407	0.0407		0.0730	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Europium-155	0.04946	U	0.172	0.173		0.300	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Lead-212	-0.01995	U	0.0984	0.0984		0.179	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Lead-214	-0.006767	U	0.0210	0.0210		0.246	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Potassium-40	-0.3609	U	1.43	1.43		1.39	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Radium-226	-0.04333	U	0.100	0.101	1.00	0.345	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Radium-228	-0.08891	U	0.304	0.304		0.370	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Sodium-22	0.0000	U	0.0160	0.0160		0.107	pCi/g	09/23/21 10:12	10/15/21 18:06	1
Zinc-65	0.0000	U	0.0281	0.0281		0.289	pCi/g	09/23/21 10:12	10/15/21 18:06	1

Lab Sample ID: LCS 160-528523/2-A
Matrix: Solid
Analysis Batch: 531972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528523

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	96.68		9.94		1.01	pCi/g	100	87 - 116
Cesium-137	26.2	25.83		2.69		0.130	pCi/g	99	87 - 120
Cobalt-60	8.48	8.042		0.831		0.0584	pCi/g	95	87 - 115

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43079-6 DU
Matrix: Solid
Analysis Batch: 531972

Client Sample ID: FSS-006-081121
Prep Type: Total/NA
Prep Batch: 528523

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.247		0.3008		0.131		0.105	pCi/g	0.52	2
Americium-241	-0.0408	U	0.02312	U	0.137		0.238	pCi/g	0.64	2
Bismuth-212	-0.480	U	-0.03977	U	0.588		1.09	pCi/g	0.87	2
Bismuth-214	0.282		0.2613		0.113		0.119	pCi/g	0.27	2
Cesium-137	-0.0209	U	0.02227	U	0.0488		0.0857	pCi/g	1.08	2
Cobalt-60	0.0276	U	0.01502	U	0.0437		0.0665	pCi/g	0.50	2
Europium-152	0.0816	U	0.1104	U	0.0693		0.139	pCi/g	0.42	2
Europium-154	0.0660	U	0.03071	U	0.0454		0.118	pCi/g	0.52	2
Europium-155	0.000	U	0.0000	U	0.0419		0.436	pCi/g	0	2
Lead-212	0.249		0.2543		0.0804		0.0895	pCi/g	0.10	2
Lead-214	0.399		0.3041		0.0976		0.0954	pCi/g	1.42	2
Potassium-40	6.83		6.603		1.35		0.743	pCi/g	0.23	2
Radium-226	0.282		0.2613		0.113	1.00	0.119	pCi/g	0.27	2
Radium-228	0.247		0.3008		0.131		0.105	pCi/g	0.52	2
Sodium-22	0.0237	U	0.04187		0.0277		0.0343	pCi/g	0.79	2
Zinc-65	0.000	U	-0.00000 0003941	U	0.166		0.302	pCi/g	0	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-530579/1-A
Matrix: Solid
Analysis Batch: 531776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530579

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.007	U	0.942	0.947	5.00	1.60	pCi/g	10/08/21 14:40	10/12/21 14:28	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.3*		*40 - 110*	*10/08/21 14:40*	*10/12/21 14:28*	*1*

Lab Sample ID: LCS 160-530579/2-A
Matrix: Solid
Analysis Batch: 531776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530579

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-63	21.5	20.67		2.71	5.00	1.71	pCi/g	96	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*78.6*		*40 - 110*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43079-2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-43079-6 DU
Matrix: Solid
Analysis Batch: 531776

Client Sample ID: FSS-006-081121
Prep Type: Total/NA
Prep Batch: 530579

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.867	U		1.324	U	1.01	5.00	1.70	pCi/g			0.64	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*81.8*		*40 - 110*

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-43079-2
Project/Site: BNL Decommissioning Project

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-D-9-P DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 528523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-6	FSS-006-081121	Total/NA	Solid	Fill_Geo-21	
MB 160-528523/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-528523/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43079-6 DU	FSS-006-081121	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 528721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-6	FSS-006-081121	Total/NA	Solid	DPS-7	
MB 160-528721/11-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-528721/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43154-D-9-P DU	Duplicate	Total/NA	Solid	DPS-7	523700

Prep Batch: 530579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-6	FSS-006-081121	Total/NA	Solid	Ext_Chrom_LSC	
MB 160-530579/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-530579/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-6 DU	FSS-006-081121	Total/NA	Solid	Ext_Chrom_LSC	

Prep Batch: 531311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-6	FSS-006-081121	Total/NA	Solid	LSC_Dist_Susp	
MB 160-531311/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-531311/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43079-6 MS	FSS-006-081121	Total/NA	Solid	LSC_Dist_Susp	
160-43587-B-1-B DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43079-2
Project/Site: BNL Decommissioning Project

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43079-6	FSS-006-081121	57.2	94.2
160-43154-D-9-P DU	Duplicate	42.5	93.8
LCS 160-528721/1-A	Lab Control Sample	74.1	89.3
MB 160-528721/11-A	Method Blank	84.2	92.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ni
Lab Sample ID	Client Sample ID	(40-110)
160-43079-6	FSS-006-081121	85.4
160-43079-6 DU	FSS-006-081121	81.8
LCS 160-530579/2-A	Lab Control Sample	78.6
MB 160-530579/1-A	Method Blank	84.3

Tracer/Carrier Legend

Ni = Ni

A-7.2
Samples FSS-017 through -043

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ANALYTICAL REPORT

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Laboratory Job ID: 160-43084-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

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

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Job ID: 160-43084-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43084-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/14/2021 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 4.3º C, 11.1º C, 22.5º C, 22.9º C, 23.5º C and 23.5º C.

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Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Receipt Exceptions
The bags for the following samples were received open and a significant amount of sample was poured into the cooler, potentially contaminating these two samples. There is sufficient sample remaining for all analyses.

ASBESTOS
An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/01/2021 and 09/07/2021 and analyzed on 09/02/2021 and 09/08/2021.

Preparation Batch 280-548182:
Lead was detected in method blank MB 280-548182/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Analytical Batch 280-549084:
Lead failed the recovery criteria low for the MS of sample 160-43079-1. Lead failed the recovery criteria high for the MSD of sample 160-43079-1. Lead exceeded the RPD limit.

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

MERCURY (CVAA)
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/03/2021.

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

PERCENT SOLIDS
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/25/2021.

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

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Laboratory: Eurofins TestAmerica, St. Louis (Continued)

STRONTIUM-90 (GFPC)

Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/17/2021, prepared on 08/27/2021 and 09/04/2021 and analyzed on 09/07/2021, 09/20/2021 and 09/25/2021.

Preparation Batch 160-524352:
The samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices: FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), and FSS-021-081221 (160-43084-5).

Preparation Batch 160-525601:
The samples could not be thoroughly homogenized before sub-sampling was performed due to the sample matrices. The samples had large rocks >2mm: FSS-042-081321 (160-43084-26), FSS-043-081321 (160-43084-27), and (160-43084-D-26-A DU).

Preparation Batch 160-524352:
The sample duplicate (DUP) precision (RER/DER) was outside control limits. Sample non-homogeneity and a matrix effect was observed and noted during preparation. In addition, the original sample and sample duplicate both had activity below the RL: (160-43079-A-2-F DU).

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

TRITIUM

Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 08/31/2021 and analyzed on 09/03/2021, 09/08/2021 and 09/09/2021.

Preparation Batch 160-524989:
The method blank (MB) had Tritium activity above the MDC. The samples exhibited concentrations greater than five (5) times that observed in the blank; therefore, re-analysis was not required: FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26), FSS-043-081321 (160-43084-27), (LCS 160-524989/2-A), (MB 160-524989/1-A), (160-43084-C-26-B MS), and (160-43084-C-27-B DU).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321

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Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/17/2021, prepared on 08/21/2021 and 09/11/2021 and analyzed on 09/02/2021, 09/03/2021 and 09/20/2021.

Preparation Batch 160-523548:
Detectors AV131-AV136 and AV139-AV145 were calibrated in August; therefore the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), and FSS-033-081321 (160-43084-17).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/17/2021, prepared on 08/21/2021 and analyzed on 09/02/2021.

Preparation Batch 160-523553:
Detectors AV83-AV97 were calibrated in August; therefore, the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26), FSS-043-081321 (160-43084-27), (LCS 160-523553/2-A), (MB 160-523553/1-A), and (160-43084-D-19-G DU).

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

CARBON-14 BY LSC
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/10/2021 and 09/14/2021 and analyzed on 09/13/2021 and 09/17/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321

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(160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/17/2021, prepared on 08/19/2021 and analyzed on 09/11/2021 and 09/12/2021.

Preparation Batch 160-523294:
The Ra-226 MDC of 0.239 pCi/g for the method blank (MB) was above the requested limit of 0.200 pCi/g. Ra-226 activity was not observed in the MB above the MDC or RL. The MDC's for the associated samples were not less than the requested limit. The data was reported with the MDC's achieved: (MB 160-523294/1-A).

The method blank z-score for Eu-152 did not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-523294/1-A).

The detection goal of 0.200 pCi/g was not met for Ra-226 for the samples. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, as the Ra-226 result is below the RL and MDC: FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-040-081321 (160-43084-24), and FSS-041-081321 (160-43084-25).

For samples FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26), FSS-043-081321 (160-43084-27), (LCS 160-523294/2-A), (MB 160-523294/1-A), and (160-43084-D-27-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-523276:
The detection goal of 0.200 pCi/g was not met for Ra-226 for the method blank. An elevated MDC can occur when higher background

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counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, as the Ra-226 result is below the RL and MDC: (MB 160-523276/1-A).

The method blank z-score for Eu-152 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-523276/1-A).

The detection goal of 0.200 pCi/g was not met for Ra-226 for the following sample. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, as the Ra-226 result is below the RL and MDC.: FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-033-081321 (160-43084-17), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), and (160-43084-D-20-K DU).

For samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), (LCS 160-523276/2-A), (MB 160-523276/1-A), and (160-43084-D-20-K DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221

Job ID: 160-43084-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/17/2021, prepared on 08/26/2021 and 09/08/2021 and analyzed on 09/12/2021, 09/17/2021 and 09/19/2021.

Preparation Batch 160-526025:
The nickel carrier recovery at 115% was outside the upper acceptance limit of 110%. The carrier recovery was truncated to 100% to minimize any potential bias a high carrier may have on the results. Note the deliverable does not show the carrier truncation. The original value of 115% is listed, but the LIM system performed the truncation for the results calculations: (MB 160-526025/1-A).

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

PLUTONIUM 241
Samples FSS-017-081221 (160-43084-1), FSS-018-081221 (160-43084-2), FSS-019-081221 (160-43084-3), FSS-020-081221 (160-43084-4), FSS-021-081221 (160-43084-5), FSS-022-081221 (160-43084-6), FSS-023-081221 (160-43084-7), FSS-024-081221 (160-43084-8), FSS-025-081221 (160-43084-9), FSS-026-081221 (160-43084-10), FSS-027-081221 (160-43084-11), FSS-028-081221 (160-43084-12), FSS-029-081321 (160-43084-13), FSS-030-081321 (160-43084-14), FSS-031-081321 (160-43084-15), FSS-032-081321 (160-43084-16), FSS-033-081321 (160-43084-17), FSS-034-081321 (160-43084-18), FSS-035-081321 (160-43084-19), FSS-036-081321 (160-43084-20), FSS-037-081321 (160-43084-21), FSS-038-081321 (160-43084-22), FSS-039-081321 (160-43084-23), FSS-040-081321 (160-43084-24), FSS-041-081321 (160-43084-25), FSS-042-081321 (160-43084-26) and FSS-043-081321 (160-43084-27) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 08/21/2021, 08/26/2021 and 09/12/2021 and analyzed on 09/09/2021, 09/10/2021, 09/11/2021 and 09/23/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing | TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-13-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	NI-63	Tritium	C-14	Sample Specific Notes:
FSS-017-081221	12-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS16 0-6"
FSS-018-081221	12-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS16 6"-12"
FSS-019-081221	12-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS16 18"-24"
FSS-020-081221	12-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS15 0-6"
FSS-021-081221	12-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS15 6"-12"
FSS-022-081221	12-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS15 18"-24"
FSS-023-081221	12-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS14 0-6"
FSS-024-081221	12-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS14 6"-12"
FSS-025-081221	12-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS14 18"-24"
FSS-026-081221	12-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS13 0-6"
FSS-027-081221	12-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS13 6"-12"
FSS-028-081221	12-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS13 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: **Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40**

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-13-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 8/14/21 0920
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002 Rev. 4

160-43084 Chain of Custody

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-13-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-029-081321	13-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS12 0-6"
FSS-030-081321	13-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS12 6"-12"
FSS-031-081321	13-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS12 18"-24"
FSS-032-081321	13-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS11 0-6"
FSS-033-081321	13-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS11 6"-12"
FSS-034-081321	13-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS11 18"-24"
FSS-035-081321	13-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS10 0-6"
FSS-036-081321	13-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS10 6"-12"
FSS-037-081321	13-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS10 18"-24"
FSS-038-081321	13-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS09 0-6"
FSS-039-081321	13-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS09 6"-12"
FSS-040-081321	13-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS09 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:	
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-13-21/17:00	Received by:Fed Ex	Company:	Date/Time:	
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 8/14/21 0920	
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:	

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-13-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	3 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Sample Specific Notes:
FSS-041-081321	13-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS08 0-6"
FSS-042-081321	13-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS08 6"-12"
FSS-043-081321	13-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	SU 7B - SS08 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by: Douglas Beard	Company: Cabrera Services, Inc.	Date/Time: 8-13-21/17:00	Received by: Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 8/14/21 0926
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002 Rev. 4.2, dated 12/20/17

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217603.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43084-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/13/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-017-081221 (160-43084-1)	8/12/21	09:00 Eastern		Solid			X	X	X	1	
FSS-018-081221 (160-43084-2)	8/12/21	09:00 Eastern		Solid			X	X	X	1	
FSS-019-081221 (160-43084-3)	8/12/21	09:00 Eastern		Solid			X	X	X	1	
FSS-020-081221 (160-43084-4)	8/12/21	10:00 Eastern		Solid			X	X	X	1	
FSS-021-081221 (160-43084-5)	8/12/21	10:00 Eastern		Solid			X	X	X	1	
FSS-022-081221 (160-43084-6)	8/12/21	10:00 Eastern		Solid			X	X	X	1	
FSS-023-081221 (160-43084-7)	8/12/21	13:30 Eastern		Solid			X	X	X	1	
FSS-024-081221 (160-43084-8)	8/12/21	13:30 Eastern		Solid			X	X	X	1	
FSS-025-081221 (160-43084-9)	8/12/21	13:30 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Kerrigan	8/16/21 17:00	ETA SLC		8/17/2021 0930	ETA Den
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.6 IR12 CF#6

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217603.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43084-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/13/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-035-081221 (160-43084-19)	8/13/21	09:30 Eastern		Solid			X	X	X	1	
FSS-036-081221 (160-43084-20)	8/13/21	09:30 Eastern		Solid			X	X	X	1	
FSS-037-081221 (160-43084-21)	8/13/21	09:30 Eastern		Solid			X	X	X	1	
FSS-038-081221 (160-43084-22)	8/13/21	08:30 Eastern		Solid			X	X	X	1	
FSS-039-081221 (160-43084-23)	8/13/21	08:30 Eastern		Solid			X	X	X	1	
FSS-040-081221 (160-43084-24)	8/13/21	08:30 Eastern		Solid			X	X	X	1	
FSS-041-081221 (160-43084-25)	8/13/21	11:30 Eastern		Solid			X	X	X	1	
FSS-042-081221 (160-43084-26)	8/13/21	11:30 Eastern		Solid			X	X	X	1	
FSS-043-081221 (160-43084-27)	8/13/21	11:30 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Micha Koninger	8/16/21 17:00	ETA Sr		8/17/2021 0730	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063128-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217601.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43084-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/14/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-017-081221 (160-43084-1)	8/12/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-018-081221 (160-43084-2)	8/12/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-019-081221 (160-43084-3)	8/12/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-020-081221 (160-43084-4)	8/12/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-021-081221 (160-43084-5)	8/12/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-022-081221 (160-43084-6)	8/12/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-023-081221 (160-43084-7)	8/12/21	13:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-024-081221 (160-43084-8)	8/12/21	13:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-025-081221 (160-43084-9)	8/12/21	13:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

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Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Micha Kerschinger	8/14/21 17:00	ETA STL	Linda Mangus	08-17-2021 9:31 AM	RJ Lee Group
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH 1063128-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217601.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 3
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43084-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/14/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-026-081221 (160-43084-10)	8/12/21	14:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-027-081221 (160-43084-11)	8/12/21	14:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-028-081221 (160-43084-12)	8/12/21	14:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-029-081221 (160-43084-13)	8/13/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-030-081221 (160-43084-14)	8/13/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-031-081221 (160-43084-15)	8/13/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-032-081221 (160-43084-16)	8/13/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-033-081221 (160-43084-17)	8/13/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-034-081221 (160-43084-18)	8/13/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kominsinger	8/16/21 17:00	ETA SR	Linda Mangini	08-17-2021 9:31 AM	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063128-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217601.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 3
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43084-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/14/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-035-081221 (160-43084-19)	8/13/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-036-081221 (160-43084-20)	8/13/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-037-081221 (160-43084-21)	8/13/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-038-081221 (160-43084-22)	8/13/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-039-081221 (160-43084-23)	8/13/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-040-081221 (160-43084-24)	8/13/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-041-081221 (160-43084-25)	8/13/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-042-081221 (160-43084-26)	8/13/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-043-081221 (160-43084-27)	8/13/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification Unconfirmed	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kominsky	8/16/21 17:00	EMSL	Linda Marquis	08-17-2021 9:31AM	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43084-1

Login Number: 43084
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Samples -16 and -17 were received open with sample compromised. There is
Sample collection date/times are provided.	True	sufficient volume remaining but possible that the samples cross contaminated one
Appropriate sample containers are used.	True	another.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43084-1

Login Number: 43084
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/17/21 11:52 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43084-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43084-1	FSS-017-081221	Solid	08/12/21 09:00	08/14/21 09:20
160-43084-2	FSS-018-081221	Solid	08/12/21 09:00	08/14/21 09:20
160-43084-3	FSS-019-081221	Solid	08/12/21 09:00	08/14/21 09:20
160-43084-4	FSS-020-081221	Solid	08/12/21 10:00	08/14/21 09:20
160-43084-5	FSS-021-081221	Solid	08/12/21 10:00	08/14/21 09:20
160-43084-6	FSS-022-081221	Solid	08/12/21 10:00	08/14/21 09:20
160-43084-7	FSS-023-081221	Solid	08/12/21 13:30	08/14/21 09:20
160-43084-8	FSS-024-081221	Solid	08/12/21 13:30	08/14/21 09:20
160-43084-9	FSS-025-081221	Solid	08/12/21 13:30	08/14/21 09:20
160-43084-10	FSS-026-081221	Solid	08/12/21 14:30	08/14/21 09:20
160-43084-11	FSS-027-081221	Solid	08/12/21 14:30	08/14/21 09:20
160-43084-12	FSS-028-081221	Solid	08/12/21 14:30	08/14/21 09:20
160-43084-13	FSS-029-081321	Solid	08/13/21 09:00	08/14/21 09:20
160-43084-14	FSS-030-081321	Solid	08/13/21 09:00	08/14/21 09:20
160-43084-15	FSS-031-081321	Solid	08/13/21 09:00	08/14/21 09:20
160-43084-16	FSS-032-081321	Solid	08/13/21 10:30	08/14/21 09:20
160-43084-17	FSS-033-081321	Solid	08/13/21 10:30	08/14/21 09:20
160-43084-18	FSS-034-081321	Solid	08/13/21 10:30	08/14/21 09:20
160-43084-19	FSS-035-081321	Solid	08/13/21 09:30	08/14/21 09:20
160-43084-20	FSS-036-081321	Solid	08/13/21 09:30	08/14/21 09:20
160-43084-21	FSS-037-081321	Solid	08/13/21 09:30	08/14/21 09:20
160-43084-22	FSS-038-081321	Solid	08/13/21 08:30	08/14/21 09:20
160-43084-23	FSS-039-081321	Solid	08/13/21 08:30	08/14/21 09:20
160-43084-24	FSS-040-081321	Solid	08/13/21 08:30	08/14/21 09:20
160-43084-25	FSS-041-081321	Solid	08/13/21 11:30	08/14/21 09:20
160-43084-26	FSS-042-081321	Solid	08/13/21 11:30	08/14/21 09:20
160-43084-27	FSS-043-081321	Solid	08/13/21 11:30	08/14/21 09:20

Detection Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Client Sample ID: FSS-017-081221 — Lab Sample ID: 160-43084-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	2.4		0.22	0.013	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-018-081221 — Lab Sample ID: 160-43084-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	4.8		0.21	0.013	mg/Kg	1	☼	6020B	Total/NA
Hg	8.8	J	19	6.1	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: FSS-019-081221 — Lab Sample ID: 160-43084-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	2.5		0.23	0.014	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-020-081221 — Lab Sample ID: 160-43084-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.66		0.28	0.017	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-021-081221 — Lab Sample ID: 160-43084-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.70		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-022-081221 — Lab Sample ID: 160-43084-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.91		0.23	0.014	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-023-081221 — Lab Sample ID: 160-43084-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.6		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-024-081221 — Lab Sample ID: 160-43084-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.74		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-025-081221 — Lab Sample ID: 160-43084-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.73		0.22	0.014	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-026-081221 — Lab Sample ID: 160-43084-10

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	6.0		0.27	0.016	mg/Kg	1	☼	6020B	Total/NA
Hg	25		22	7.1	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: FSS-027-081221 — Lab Sample ID: 160-43084-11

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	5.3		0.27	0.016	mg/Kg	1	☼	6020B	Total/NA
Hg	18	J	21	6.9	ug/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Client Sample ID: FSS-028-081221 — Lab Sample ID: 160-43084-12

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	5.6		0.30	0.018	mg/Kg	1	☼	6020B	Total/NA
Hg	23		20	6.5	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: FSS-029-081321 — Lab Sample ID: 160-43084-13

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	5.9		0.24	0.015	mg/Kg	1	☼	6020B	Total/NA
Hg	26		19	6.2	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: FSS-030-081321 — Lab Sample ID: 160-43084-14

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.9		0.24	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-031-081321 — Lab Sample ID: 160-43084-15

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.0		0.22	0.013	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-032-081321 — Lab Sample ID: 160-43084-16

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.93		0.29	0.018	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-033-081321 — Lab Sample ID: 160-43084-17

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.84		0.21	0.013	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-034-081321 — Lab Sample ID: 160-43084-18

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.55		0.23	0.014	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-035-081321 — Lab Sample ID: 160-43084-19

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.40		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-036-081321 — Lab Sample ID: 160-43084-20

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.1		0.30	0.018	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-037-081321 — Lab Sample ID: 160-43084-21

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.59		0.21	0.013	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-038-081321 — Lab Sample ID: 160-43084-22

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.9		0.28	0.017	mg/Kg	1	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Client Sample ID: FSS-039-081321 — Lab Sample ID: 160-43084-23

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.8		0.24	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-040-081321 — Lab Sample ID: 160-43084-24

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.0		0.21	0.013	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-041-081321 — Lab Sample ID: 160-43084-25

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.73		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-042-081321 — Lab Sample ID: 160-43084-26

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.54		0.25	0.015	mg/Kg	1	☼	6020B	Total/NA

Client Sample ID: FSS-043-081321 — Lab Sample ID: 160-43084-27

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.79		0.24	0.015	mg/Kg	1	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: FSS-017-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.201	U	0.219	0.219	3.00	0.366	pCi/g	08/27/21 13:56	09/07/21 17:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.6*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*
Y Carrier	*92.3*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.172	U	0.212	0.212	1.00	0.362	pCi/g	08/31/21 13:32	09/08/21 23:25	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0234	U	0.0658	0.0658	1.00	0.131	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	**0.102**		0.0780	0.0784	1.00	0.0997	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*68.4*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.129**		0.0782	0.0789	1.00	0.0826	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.00980	U	0.0264	0.0264	1.00	0.0632	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.128**		0.0746	0.0753	1.00	0.0648	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*65.5*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.855	U	1.02	1.03	5.00	1.76	pCi/g	09/10/21 08:46	09/13/21 03:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.160	U	0.140	0.141		0.298	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Americium-241	0.0880	U	0.0898	0.0902		0.123	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Bismuth-212	-0.144	U	0.694	0.694		1.24	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Bismuth-214	**0.331**		0.0995	0.105		0.0913	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Cesium-137	**0.356**		0.0811	0.0888		0.0626	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Cobalt-60	-0.00306	U	0.0672	0.0672		0.0823	pCi/g	08/19/21 11:02	09/11/21 20:56	1

Client Sample ID: FSS-017-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-1

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0477	U	0.0946	0.0948		0.162	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Europium-154	0.0385	U	0.0717	0.0718		0.107	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Europium-155	0.0263	U	0.0840	0.0841		0.366	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Lead-212	**0.279**		0.0788	0.0864		0.0994	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Lead-214	**0.293**		0.0894	0.0942		0.0920	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Potassium-40	**2.43**		0.748	0.787		0.713	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Radium-226	**0.331**		0.0995	0.105	0.200	0.0913	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Sodium-22	-0.0251	U	0.0484	0.0485		0.0856	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Thorium-232	0.160	U	0.140	0.141		0.298	pCi/g	08/19/21 11:02	09/11/21 20:56	1
Zinc-65	-0.00440	U	0.0778	0.0778		0.244	pCi/g	08/19/21 11:02	09/11/21 20:56	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/11/21 20:56*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0509	U	0.873	0.873	5.00	1.55	pCi/g	08/26/21 10:56	09/19/21 02:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.3*		*40 - 110*	*08/26/21 10:56*	*09/19/21 02:07*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.126	U	1.46	1.46	5.00	2.53	pCi/g	08/26/21 13:52	09/09/21 10:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*68.4*		*30 - 110*	*08/26/21 13:52*	*09/09/21 10:54*	*1*

Client Sample ID: FSS-017-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-1

Matrix: Solid
Percent Solids: 97.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.4**		0.22	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 05:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/03/21 16:10	09/03/21 18:53	1

Client Sample ID: FSS-018-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-2

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0861	U	0.200	0.200	3.00	0.351	pCi/g	08/27/21 13:56	09/07/21 17:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.9*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*
Y Carrier	*92.0*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.101	U	0.199	0.199	1.00	0.349	pCi/g	08/31/21 13:32	09/08/21 23:48	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0430	U	0.0473	0.0475	1.00	0.0718	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00239	U	0.0204	0.0204	1.00	0.0592	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*74.4*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.134**		0.0762	0.0770	1.00	0.0785	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0208	U	0.0335	0.0336	1.00	0.0576	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.205**		0.0881	0.0897	1.00	0.0535	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*70.3*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.223	U	1.00	1.00	5.00	1.77	pCi/g	09/10/21 08:46	09/13/21 04:16	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.373**		0.131	0.136		0.181	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Americium-241	0.0462	U	0.0869	0.0870		0.114	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Bismuth-212	0.159	U	0.262	0.263		0.458	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Bismuth-214	**0.286**		0.0862	0.0910		0.0840	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Cesium-137	**0.351**		0.0591	0.0691		0.0270	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Cobalt-60	0.0260	U	0.0154	0.0156		0.0471	pCi/g	08/19/21 11:02	09/11/21 20:55	1

Client Sample ID: FSS-018-081221
Lab Sample ID: 160-43084-2
Date Collected: 08/12/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	-0.0367	U	0.0821	0.0822		0.141	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Europium-154	0.0338	U	0.0547	0.0548		0.0937	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Europium-155	0.0573	U	0.199	0.199		0.340	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Lead-212	**0.365**		0.0983	0.109		0.142	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Lead-214	**0.283**		0.0810	0.0860		0.0759	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Potassium-40	**4.81**		0.798	0.932		0.253	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Radium-226	**0.286**		0.0862	0.0910	0.200	0.0840	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Sodium-22	-0.0505	U	0.0547	0.0550		0.0906	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Thorium-232	**0.373**		0.131	0.136		0.181	pCi/g	08/19/21 11:02	09/11/21 20:55	1
Zinc-65	-0.0449	U	0.117	0.118		0.206	pCi/g	08/19/21 11:02	09/11/21 20:55	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.155*		*0.0409*	*0.0438*		*0.0268*	*pCi/g*	*08/19/21 11:02*	*09/11/21 20:55*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0430	U	0.865	0.865	5.00	1.52	pCi/g	08/26/21 10:56	09/19/21 03:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.6*		*40 - 110*	*08/26/21 10:56*	*09/19/21 03:14*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.943	U	1.35	1.35	5.00	2.48	pCi/g	08/26/21 13:52	09/09/21 13:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*74.4*		*30 - 110*	*08/26/21 13:52*	*09/09/21 13:06*	*1*

Client Sample ID: FSS-018-081221
Lab Sample ID: 160-43084-2
Date Collected: 08/12/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**4.8**		0.21	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 05:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**8.8**	**J**	19	6.1	ug/Kg	☼	09/03/21 16:10	09/03/21 19:11	1

Client Sample ID: FSS-019-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-3

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0153	U	0.169	0.169	3.00	0.310	pCi/g	08/27/21 13:56	09/07/21 17:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.9*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*
Y Carrier	*93.5*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:24*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0107	U	0.184	0.184	1.00	0.347	pCi/g	08/31/21 13:32	09/09/21 00:10	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0203	U	0.0485	0.0485	1.00	0.0987	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00290	U	0.0248	0.0248	1.00	0.0717	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*60.8*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0475	U	0.0571	0.0573	1.00	0.0931	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.000	U	0.00644	0.00644	1.00	0.0394	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.208**		0.0925	0.0941	1.00	0.0510	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.6*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.547	U	0.979	0.980	5.00	1.67	pCi/g	09/10/21 08:46	09/13/21 04:39	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.234	U	0.215	0.216		0.252	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Americium-241	0.0717	U	0.111	0.112		0.189	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Bismuth-212	0.000	U	0.332	0.332		1.00	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Bismuth-214	**0.261**		0.0799	0.0842		0.0661	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Cesium-137	**0.0942**		0.0326	0.0340		0.0217	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Cobalt-60	-0.0314	U	0.0850	0.0850		0.0909	pCi/g	08/19/21 11:02	09/11/21 21:44	1

Client Sample ID: FSS-019-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-3

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.270	U	0.128	0.131		0.367	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Europium-154	0.0364	U	0.0510	0.0511		0.0938	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Europium-155	-0.000489	U	0.142	0.142		0.530	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Lead-212	**0.280**		0.0811	0.0885		0.112	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Lead-214	0.0638	U	0.152	0.153		0.281	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Potassium-40	**4.15**		0.912	1.00		0.551	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Radium-226	**0.261**		0.0799	0.0842	0.200	0.0661	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Sodium-22	0.0121	U	0.0347	0.0347		0.0653	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Thorium-232	0.234	U	0.215	0.216		0.252	pCi/g	08/19/21 11:02	09/11/21 21:44	1
Zinc-65	-0.0208	U	0.107	0.107		0.245	pCi/g	08/19/21 11:02	09/11/21 21:44	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/11/21 21:44*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.00705	U	0.934	0.934	5.00	1.63	pCi/g	08/26/21 10:56	09/19/21 04:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.7*		*40 - 110*	*08/26/21 10:56*	*09/19/21 04:20*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.42	U	1.60	1.61	5.00	2.92	pCi/g	08/26/21 13:52	09/09/21 14:12	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*60.8*		*30 - 110*	*08/26/21 13:52*	*09/09/21 14:12*	*1*

Client Sample ID: FSS-019-081221

Date Collected: 08/12/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-3

Matrix: Solid
Percent Solids: 94.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.5**		0.23	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 05:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/03/21 16:10	09/03/21 19:13	1

Client Sample ID: FSS-020-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-4

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.169	U	0.182	0.183	3.00	0.305	pCi/g	08/27/21 13:56	09/07/21 17:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.2*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*
Y Carrier	*92.7*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0759	U	0.198	0.199	1.00	0.354	pCi/g	08/31/21 13:32	09/09/21 00:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0276	U	0.0506	0.0506	1.00	0.0963	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00306	U	0.0262	0.0262	1.00	0.0758	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*59.0*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.133**		0.0756	0.0764	1.00	0.0596	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	-0.00662	U	0.00918	0.00919	1.00	0.0742	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	0.0319	U	0.0429	0.0430	1.00	0.0709	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*64.2*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.665	U	0.987	0.990	5.00	1.69	pCi/g	09/10/21 08:46	09/13/21 05:01	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.334**		0.107	0.112		0.244	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Americium-241	0.00308	U	0.117	0.117		0.205	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Bismuth-212	0.0167	U	0.538	0.538		0.992	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Bismuth-214	**0.233**		0.103	0.106		0.111	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Cesium-137	0.0290	U	0.0528	0.0528		0.0633	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Cobalt-60	0.00645	U	0.00614	0.00618		0.0559	pCi/g	08/19/21 11:02	09/11/21 21:47	1

Client Sample ID: FSS-020-081221
Lab Sample ID: 160-43084-4
Date Collected: 08/12/21 10:00
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0581	U	0.105	0.105		0.112	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Europium-154	0.00243	U	0.00359	0.00360		0.0994	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Europium-155	0.0450	U	0.0936	0.0938		0.229	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Lead-212	**0.329**		0.0686	0.0803		0.0696	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Lead-214	**0.279**		0.0746	0.0799		0.0810	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Potassium-40	**1.59**		0.767	0.783		0.829	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Radium-226	**0.233**		0.103	0.106	0.200	0.111	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Sodium-22	0.00912	U	0.0283	0.0283		0.0540	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Thorium-232	**0.334**		0.107	0.112		0.244	pCi/g	08/19/21 11:02	09/11/21 21:47	1
Zinc-65	0.000	U	0.0136	0.0136		0.193	pCi/g	08/19/21 11:02	09/11/21 21:47	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0819*		*0.0369*	*0.0379*		*0.0394*	*pCi/g*	*08/19/21 11:02*	*09/11/21 21:47*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.262	U	0.863	0.863	5.00	1.50	pCi/g	08/26/21 10:56	09/19/21 05:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.9*		*40 - 110*	*08/26/21 10:56*	*09/19/21 05:26*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.32	U	1.62	1.62	5.00	2.94	pCi/g	08/26/21 13:52	09/09/21 15:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*59.0*		*30 - 110*	*08/26/21 13:52*	*09/09/21 15:18*	*1*

Client Sample ID: FSS-020-081221
Lab Sample ID: 160-43084-4
Date Collected: 08/12/21 10:00
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.66**		0.28	0.017	mg/Kg	☼	09/07/21 07:45	09/08/21 05:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:16	1

Client Sample ID: FSS-021-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-5

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.190	U	0.202	0.203	3.00	0.338	pCi/g	08/27/21 13:56	09/07/21 17:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.0*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*
Y Carrier	*94.2*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0770	U	0.209	0.209	1.00	0.377	pCi/g	08/31/21 13:32	09/09/21 00:55	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00973	U	0.0626	0.0626	1.00	0.137	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00325	U	0.0397	0.0397	1.00	0.102	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.6*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0201	U	0.0696	0.0697	1.00	0.140	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	-0.0643	U	0.0432	0.0435	1.00	0.166	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	0.0631	U	0.0660	0.0662	1.00	0.101	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*62.7*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.701	U	0.963	0.966	5.00	1.63	pCi/g	09/10/21 08:46	09/13/21 05:24	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.242**		0.0913	0.0944		0.0661	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Americium-241	0.0405	U	0.0892	0.0893		0.153	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Bismuth-212	0.283	U	0.434	0.435		0.745	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Bismuth-214	**0.181**		0.0766	0.0788		0.0885	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Cesium-137	0.0226	U	0.0403	0.0404		0.0698	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Cobalt-60	-0.0316	U	0.0696	0.0697		0.0769	pCi/g	08/19/21 11:02	09/11/21 21:45	1

Client Sample ID: FSS-021-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-5

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0512	U	0.0861	0.0863		0.124	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Europium-154	0.0571	U	0.0856	0.0858		0.0907	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Europium-155	0.000	U	0.0592	0.0592		0.369	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Lead-212	**0.238**		0.0530	0.0610		0.0518	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Lead-214	**0.228**		0.0628	0.0670		0.0763	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Potassium-40	**1.73**		0.485	0.516		0.261	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Radium-226	**0.181**		0.0766	0.0788	0.200	0.0885	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Sodium-22	-0.00790	U	0.0332	0.0332		0.0623	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Thorium-232	**0.242**		0.0913	0.0944		0.0661	pCi/g	08/19/21 11:02	09/11/21 21:45	1
Zinc-65	0.0405	U	0.0807	0.0808		0.142	pCi/g	08/19/21 11:02	09/11/21 21:45	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.127*		*0.0327*	*0.0352*		*0.0162*	*pCi/g*	*08/19/21 11:02*	*09/11/21 21:45*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.953	U	0.998	1.00	5.00	1.68	pCi/g	08/26/21 10:56	09/19/21 06:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*76.6*		*40 - 110*	*08/26/21 10:56*	*09/19/21 06:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.514	U	1.64	1.64	5.00	2.92	pCi/g	08/26/21 13:52	09/09/21 16:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.6*		*30 - 110*	*08/26/21 13:52*	*09/09/21 16:24*	*1*

Client Sample ID: FSS-021-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-5

Matrix: Solid
Percent Solids: 97.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.70**		0.25	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 05:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:18	1

Client Sample ID: FSS-022-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-6

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.179	U	0.203	0.203	3.00	0.340	pCi/g	09/04/21 14:11	09/25/21 15:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*
Y Carrier	*81.9*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0592	U	0.178	0.179	1.00	0.345	pCi/g	08/31/21 13:32	09/09/21 01:18	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	**0.0885**		0.0638	0.0642	1.00	0.0664	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	-0.00537	U	0.00744	0.00746	1.00	0.0602	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*60.1*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.140**		0.0842	0.0850	1.00	0.0981	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0158	U	0.0367	0.0367	1.00	0.0784	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.201**		0.0892	0.0907	1.00	0.0492	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.3*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.00	U	0.945	0.951	5.00	1.57	pCi/g	09/10/21 08:46	09/13/21 05:46	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.459**		0.144	0.151		0.0868	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Americium-241	0.0320	U	0.133	0.134		0.231	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Bismuth-212	0.102	U	0.827	0.827		1.48	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Bismuth-214	0.0360	U	0.129	0.129		0.253	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Cesium-137	-0.00133	U	0.0824	0.0824		0.113	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Cobalt-60	0.0107	U	0.0680	0.0680		0.0820	pCi/g	08/19/21 11:02	09/11/21 21:46	1

Client Sample ID: FSS-022-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-6

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0767	U	0.128	0.129		0.137	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Europium-154	0.0419	U	0.0733	0.0734		0.0918	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Europium-155	0.0600	U	0.178	0.178		0.305	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Lead-212	**0.294**		0.0830	0.0910		0.107	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Lead-214	**0.359**		0.0925	0.0995		0.0822	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Potassium-40	**1.35**		0.768	0.780		0.892	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Radium-226	0.0360	U	0.129	0.129	0.200	0.253	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Sodium-22	**0.0398**		0.0260	0.0263		0.0326	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Thorium-232	**0.459**		0.144	0.151		0.0868	pCi/g	08/19/21 11:02	09/11/21 21:46	1
Zinc-65	0.0429	U	0.0985	0.0986		0.175	pCi/g	08/19/21 11:02	09/11/21 21:46	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/11/21 21:46*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.649	U	0.936	0.938	5.00	1.63	pCi/g	08/26/21 14:26	09/12/21 01:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.6*		*40 - 110*	*08/26/21 14:26*	*09/12/21 01:01*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.06	U	1.67	1.67	5.00	3.10	pCi/g	08/26/21 13:52	09/09/21 17:31	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*60.1*		*30 - 110*	*08/26/21 13:52*	*09/09/21 17:31*	*1*

Client Sample ID: FSS-022-081221

Date Collected: 08/12/21 10:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-6

Matrix: Solid
Percent Solids: 92.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.91**		0.23	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 05:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:21	1

Client Sample ID: FSS-023-081221

Date Collected: 08/12/21 13:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-7

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.339**		0.192	0.194	3.00	0.297	pCi/g	09/04/21 14:11	09/25/21 15:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.5*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0248	U	0.193	0.193	1.00	0.356	pCi/g	08/31/21 13:32	09/09/21 01:41	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0528	U	0.0490	0.0492	1.00	0.0622	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.000	U	0.00493	0.00493	1.00	0.0302	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*64.9*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0329	U	0.0513	0.0513	1.00	0.0921	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0346	U	0.0432	0.0433	1.00	0.0609	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.0883**		0.0596	0.0600	1.00	0.0489	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*64.6*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.340	U	0.934	0.934	5.00	1.61	pCi/g	09/10/21 08:46	09/13/21 06:09	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.178**		0.123	0.125		0.151	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Americium-241	0.0544	U	0.0920	0.0922		0.157	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Bismuth-212	0.00322	U	0.619	0.619		1.13	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Bismuth-214	0.0807	U	0.171	0.172		0.284	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Cesium-137	0.0112	U	0.0537	0.0537		0.0959	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Cobalt-60	0.00313	U	0.0192	0.0192		0.0645	pCi/g	08/19/21 11:02	09/11/21 22:39	1

Client Sample ID: FSS-023-081221

Lab Sample ID: 160-43084-7
Date Collected: 08/12/21 13:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0294	U	0.0381	0.0383		0.128	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Europium-154	**0.109**		0.0590	0.0601		0.0908	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Europium-155	-0.000464	U	0.121	0.121		0.472	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Lead-212	**0.250**		0.0752	0.0816		0.0754	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Lead-214	0.0230	U	0.0502	0.0502		0.0877	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Potassium-40	**2.03**		0.644	0.675		0.523	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Radium-226	0.0807	U	0.171	0.172	0.200	0.284	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Sodium-22	-0.0429	U	0.0583	0.0585		0.0988	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Thorium-232	**0.178**		0.123	0.125		0.151	pCi/g	08/19/21 11:02	09/11/21 22:39	1
Zinc-65	0.00280	U	0.0998	0.0998		0.187	pCi/g	08/19/21 11:02	09/11/21 22:39	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/11/21 22:39*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.07	U	0.811	0.818	5.00	1.36	pCi/g	08/26/21 14:26	09/12/21 02:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.2*		*40 - 110*	*08/26/21 14:26*	*09/12/21 02:07*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.575	U	1.38	1.38	5.00	2.43	pCi/g	08/26/21 13:52	09/09/21 18:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*64.9*		*30 - 110*	*08/26/21 13:52*	*09/09/21 18:37*	*1*

Client Sample ID: FSS-023-081221

Lab Sample ID: 160-43084-7
Date Collected: 08/12/21 13:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 93.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.6**		0.25	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 06:07	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:23	1

Client Sample ID: FSS-024-081221

Date Collected: 08/12/21 13:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-8

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.237	U	0.165	0.166	3.00	0.261	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*92.8*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*89.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.117	U	0.204	0.204	1.00	0.358	pCi/g	08/31/21 13:32	09/09/21 02:03	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0124	U	0.0456	0.0456	1.00	0.102	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.0249	U	0.0345	0.0346	1.00	0.0373	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*58.4*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0596	U	0.0713	0.0715	1.00	0.118	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0322	U	0.0447	0.0448	1.00	0.0722	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.124**		0.0738	0.0745	1.00	0.0691	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*69.7*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.631	U	0.733	0.736	5.00	1.24	pCi/g	09/14/21 15:20	09/17/21 02:01	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.250**		0.158	0.159		0.162	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Americium-241	-0.0530	U	0.0519	0.0522		0.203	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Bismuth-212	-0.321	U	0.569	0.570		0.982	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Bismuth-214	0.0213	U	0.0400	0.0401		0.207	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Cesium-137	0.00247	U	0.0467	0.0467		0.0847	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Cobalt-60	0.00121	U	0.0399	0.0399		0.0501	pCi/g	08/19/21 11:02	09/11/21 22:38	1

Client Sample ID: FSS-024-081221
Lab Sample ID: 160-43084-8
Date Collected: 08/12/21 13:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0489	U	0.0882	0.0883		0.104	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Europium-154	0.0510	U	0.0834	0.0836		0.0786	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Europium-155	0.0598	U	0.209	0.210		0.358	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Lead-212	**0.227**		0.0550	0.0621		0.0588	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Lead-214	**0.237**		0.0625	0.0670		0.0640	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Potassium-40	**2.34**		0.648	0.689		0.588	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Radium-226	0.0213	U	0.0400	0.0401	0.200	0.207	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Sodium-22	-0.0547	U	0.0583	0.0586		0.0963	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Thorium-232	**0.250**		0.158	0.159		0.162	pCi/g	08/19/21 11:02	09/11/21 22:38	1
Zinc-65	0.000	U	0.0172	0.0172		0.195	pCi/g	08/19/21 11:02	09/11/21 22:38	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.112*		*0.0345*	*0.0363*		*0.0289*	*pCi/g*	*08/19/21 11:02*	*09/11/21 22:38*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.726	U	0.833	0.836	5.00	1.45	pCi/g	08/26/21 14:26	09/12/21 03:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*92.1*		*40 - 110*	*08/26/21 14:26*	*09/12/21 03:13*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.454	U	1.98	1.98	5.00	3.64	pCi/g	08/26/21 13:52	09/09/21 19:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*58.4*		*30 - 110*	*08/26/21 13:52*	*09/09/21 19:43*	*1*

Client Sample ID: FSS-024-081221
Lab Sample ID: 160-43084-8
Date Collected: 08/12/21 13:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 89.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.74**		0.25	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 06:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:26	1

Client Sample ID: FSS-025-081221

Date Collected: 08/12/21 13:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-9

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.241	U	0.215	0.216	3.00	0.354	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*84.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.250	U	0.218	0.219	1.00	0.355	pCi/g	08/31/21 13:32	09/09/21 02:26	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00918	U	0.0365	0.0365	1.00	0.0870	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	-0.00919	U	0.0104	0.0104	1.00	0.0758	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*55.1*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.170**		0.0930	0.0940	1.00	0.109	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0123	U	0.0240	0.0240	1.00	0.0368	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.214**		0.0905	0.0922	1.00	0.0476	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*65.3*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.612	U	0.580	0.584	5.00	0.968	pCi/g	09/14/21 15:20	09/17/21 03:09	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.405**		0.127	0.134		0.159	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Americium-241	-0.0288	U	0.133	0.133		0.229	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Bismuth-212	0.206	U	0.520	0.521		0.916	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Bismuth-214	**0.316**		0.0891	0.0948		0.0859	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Cesium-137	0.0188	U	0.0346	0.0347		0.0425	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Cobalt-60	0.0226	U	0.0429	0.0429		0.0493	pCi/g	08/19/21 11:02	09/11/21 22:40	1

Client Sample ID: FSS-025-081221

Lab Sample ID: 160-43084-9

Date Collected: 08/12/21 13:30

Matrix: Solid

Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0718	U	0.113	0.113		0.125	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Europium-154	0.0301	U	0.0299	0.0300		0.110	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Europium-155	-0.0771	U	0.222	0.222		0.379	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Lead-212	**0.541**		0.0763	0.103		0.0604	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Lead-214	**0.305**		0.0844	0.0900		0.0786	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Potassium-40	**3.17**		0.663	0.735		0.266	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Radium-226	**0.316**		0.0891	0.0948	0.200	0.0859	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Sodium-22	**0.0345**		0.0214	0.0216		0.0254	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Thorium-232	**0.405**		0.127	0.134		0.159	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Zinc-65	-0.0173	U	0.104	0.104		0.188	pCi/g	08/19/21 11:02	09/11/21 22:40	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.143*		*0.0603*	*0.0620*		*0.0611*	*pCi/g*	*08/19/21 11:02*	*09/11/21 22:40*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.14	U	0.859	0.867	5.00	1.46	pCi/g	08/26/21 14:26	09/12/21 04:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.6*		*40 - 110*	*08/26/21 14:26*	*09/12/21 04:19*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.537	U	1.84	1.84	5.00	3.17	pCi/g	08/26/21 13:52	09/09/21 20:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*55.1*		*30 - 110*	*08/26/21 13:52*	*09/09/21 20:49*	*1*

Client Sample ID: FSS-025-081221

Lab Sample ID: 160-43084-9

Date Collected: 08/12/21 13:30

Matrix: Solid

Date Received: 08/14/21 09:20

Percent Solids: 96.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.73**		0.22	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 06:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	21	6.7	ug/Kg	☼	09/03/21 16:10	09/03/21 19:28	1

Client Sample ID: FSS-026-081221

Date Collected: 08/12/21 14:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-10

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.179	U	0.203	0.204	3.00	0.342	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.8*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*87.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.196	U	0.210	0.211	1.00	0.351	pCi/g	08/31/21 13:32	09/09/21 02:49	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0501	U	0.0494	0.0495	1.00	0.0623	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.0195	U	0.0313	0.0314	1.00	0.0539	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.6*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.160**		0.0894	0.0904	1.00	0.105	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.00603	U	0.0251	0.0251	1.00	0.0676	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.179**		0.0830	0.0843	1.00	0.0542	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.9*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.219	U	0.716	0.716	5.00	1.26	pCi/g	09/14/21 15:20	09/17/21 03:32	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.433**		0.169	0.174		0.224	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Americium-241	0.0426	U	0.144	0.144		0.247	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Bismuth-212	0.0361	U	0.588	0.588		1.08	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Bismuth-214	**0.265**		0.0887	0.0927		0.0887	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Cesium-137	0.0175	U	0.0524	0.0524		0.0928	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Cobalt-60	-0.0559	U	0.0941	0.0942		0.105	pCi/g	08/19/21 11:02	09/11/21 22:40	1

Client Sample ID: FSS-026-081221
Lab Sample ID: 160-43084-10
Date Collected: 08/12/21 14:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	**0.145**		0.105	0.106		0.133	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Europium-154	0.00147	U	0.00261	0.00262		0.121	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Europium-155	0.0270	U	0.0748	0.0748		0.305	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Lead-212	**0.324**		0.0852	0.0946		0.110	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Lead-214	**0.338**		0.102	0.107		0.0880	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Potassium-40	**3.68**		0.854	0.931		0.672	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Radium-226	**0.265**		0.0887	0.0927	0.200	0.0887	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Sodium-22	**0.0376**		0.0246	0.0249		0.0308	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Thorium-232	**0.433**		0.169	0.174		0.224	pCi/g	08/19/21 11:02	09/11/21 22:40	1
Zinc-65	-0.00415	U	0.0773	0.0773		0.230	pCi/g	08/19/21 11:02	09/11/21 22:40	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.111*		*0.0427*	*0.0442*		*0.0421*	*pCi/g*	*08/19/21 11:02*	*09/11/21 22:40*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.838	U	0.808	0.812	5.00	1.39	pCi/g	08/26/21 14:26	09/12/21 06:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*08/26/21 14:26*	*09/12/21 06:31*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.44	U	1.60	1.61	5.00	2.94	pCi/g	08/26/21 13:52	09/09/21 21:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.6*		*30 - 110*	*08/26/21 13:52*	*09/09/21 21:55*	*1*

Client Sample ID: FSS-026-081221
Lab Sample ID: 160-43084-10
Date Collected: 08/12/21 14:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 89.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.0**		0.27	0.016	mg/Kg	☼	09/07/21 07:45	09/08/21 06:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**25**		22	7.1	ug/Kg	☼	09/03/21 16:10	09/03/21 19:31	1

Client Sample ID: FSS-027-081221

Date Collected: 08/12/21 14:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-11

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0597	U	0.168	0.168	3.00	0.320	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.6*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*83.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0817	U	0.200	0.200	1.00	0.358	pCi/g	08/31/21 13:32	09/09/21 03:11	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0191	U	0.0308	0.0308	1.00	0.0529	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00821	U	0.0221	0.0221	1.00	0.0530	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.9*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.212**		0.104	0.105	1.00	0.110	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0132	U	0.0258	0.0259	1.00	0.0396	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	**0.182**		0.0884	0.0897	1.00	0.0654	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*63.6*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.919	U	0.800	0.805	5.00	1.33	pCi/g	09/14/21 15:20	09/17/21 03:55	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.344**		0.165	0.169		0.230	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Americium-241	0.0146	U	0.121	0.121		0.209	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Bismuth-212	0.252	U	0.491	0.492		0.854	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Bismuth-214	**0.259**		0.0825	0.0866		0.0868	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Cesium-137	-0.0401	U	0.0617	0.0618		0.105	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Cobalt-60	0.00115	U	0.0380	0.0380		0.0477	pCi/g	08/19/21 11:02	09/12/21 18:22	1

Client Sample ID: FSS-027-081221

Lab Sample ID: 160-43084-11

Date Collected: 08/12/21 14:30

Matrix: Solid

Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.112	U	0.0868	0.0875		0.152	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Europium-154	0.0272	U	0.0445	0.0446		0.0864	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Europium-155	0.0395	U	0.134	0.134		0.367	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Lead-212	**0.381**		0.0677	0.0832		0.0666	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Lead-214	**0.265**		0.0779	0.0825		0.0784	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Potassium-40	**3.38**		0.732	0.807		0.561	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Radium-226	**0.259**		0.0825	0.0866	0.200	0.0868	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Sodium-22	0.0145	U	0.0259	0.0259		0.0461	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Thorium-232	**0.344**		0.165	0.169		0.230	pCi/g	08/19/21 11:02	09/12/21 18:22	1
Zinc-65	-0.0553	U	0.122	0.122		0.212	pCi/g	08/19/21 11:02	09/12/21 18:22	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.111*		*0.0335*	*0.0353*		*0.0275*	*pCi/g*	*08/19/21 11:02*	*09/12/21 18:22*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.23	U	0.934	0.942	5.00	1.57	pCi/g	08/26/21 14:26	09/12/21 07:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.6*		*40 - 110*	*08/26/21 14:26*	*09/12/21 07:38*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.141	U	1.69	1.69	5.00	3.00	pCi/g	08/26/21 13:52	09/09/21 23:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.9*		*30 - 110*	*08/26/21 13:52*	*09/09/21 23:02*	*1*

Client Sample ID: FSS-027-081221

Lab Sample ID: 160-43084-11

Date Collected: 08/12/21 14:30

Matrix: Solid

Date Received: 08/14/21 09:20

Percent Solids: 87.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.3**		0.27	0.016	mg/Kg	☼	09/07/21 07:45	09/08/21 06:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**18**	**J**	21	6.9	ug/Kg	☼	09/03/21 16:10	09/03/21 19:33	1

Client Sample ID: FSS-028-081221

Date Collected: 08/12/21 14:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-12

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0813	U	0.174	0.174	3.00	0.305	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.238	U	0.216	0.217	1.00	0.354	pCi/g	08/31/21 13:32	09/09/21 03:34	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	**0.0620**		0.0520	0.0523	1.00	0.0522	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.000	U	0.00529	0.00529	1.00	0.0324	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.7*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.280**		0.116	0.118	1.00	0.113	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.0607	U	0.0564	0.0566	1.00	0.0619	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.269**		0.105	0.107	1.00	0.0634	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*62.8*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0547	U	0.689	0.689	5.00	1.25	pCi/g	09/14/21 15:20	09/17/21 04:17	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.674**		0.186	0.198		0.144	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Americium-241	0.0105	U	0.146	0.146		0.255	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Bismuth-212	-0.453	U	0.774	0.775		1.33	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Bismuth-214	**0.227**		0.0952	0.0980		0.105	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Cesium-137	0.0327	U	0.0630	0.0631		0.109	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Cobalt-60	0.0307	U	0.0227	0.0229		0.0323	pCi/g	08/19/21 11:02	09/12/21 18:21	1

Client Sample ID: FSS-028-081221
Lab Sample ID: 160-43084-12
Date Collected: 08/12/21 14:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0834	U	0.120	0.120		0.146	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Europium-154	0.0733	U	0.0882	0.0886		0.106	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Europium-155	-0.00429	U	0.159	0.159		0.313	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Lead-212	**0.331**		0.0891	0.0984		0.117	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Lead-214	**0.407**		0.100	0.109		0.0818	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Potassium-40	**3.82**		0.874	0.955		0.681	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Radium-226	**0.227**		0.0952	0.0980	0.200	0.105	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Sodium-22	-0.00706	U	0.0398	0.0398		0.0760	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Thorium-232	**0.674**		0.186	0.198		0.144	pCi/g	08/19/21 11:02	09/12/21 18:21	1
Zinc-65	0.0411	U	0.109	0.109		0.194	pCi/g	08/19/21 11:02	09/12/21 18:21	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.171*		*0.0566*	*0.0592*		*0.0528*	*pCi/g*	*08/19/21 11:02*	*09/12/21 18:21*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.64**		0.763	0.781	5.00	1.24	pCi/g	08/26/21 14:26	09/12/21 08:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*108*		*40 - 110*	*08/26/21 14:26*	*09/12/21 08:44*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.72	U	1.73	1.73	5.00	2.86	pCi/g	08/26/21 13:52	09/10/21 00:08	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.7*		*30 - 110*	*08/26/21 13:52*	*09/10/21 00:08*	*1*

Client Sample ID: FSS-028-081221
Lab Sample ID: 160-43084-12
Date Collected: 08/12/21 14:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 86.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.6**		0.30	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 06:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**23**		20	6.5	ug/Kg	☼	09/03/21 16:10	09/03/21 19:41	1

Client Sample ID: FSS-029-081321

Date Collected: 08/13/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-13

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.183	U	0.171	0.172	3.00	0.282	pCi/g	09/04/21 14:11	09/25/21 15:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.4*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*
Y Carrier	*90.8*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0489	U	0.193	0.193	1.00	0.350	pCi/g	08/31/21 13:32	09/09/21 03:57	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0555	U	0.0623	0.0624	1.00	0.0926	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.0243	U	0.0391	0.0391	1.00	0.0672	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*50.5*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0691	U	0.0687	0.0690	1.00	0.105	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	-0.0232	U	0.0337	0.0338	1.00	0.120	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.141**		0.0817	0.0826	1.00	0.0835	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*62.9*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.416	U	0.739	0.741	5.00	1.28	pCi/g	09/14/21 15:20	09/17/21 04:40	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.452**		0.114	0.123		0.161	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Americium-241	0.0755	U	0.110	0.111		0.187	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Bismuth-212	0.287	U	0.466	0.467		0.802	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Bismuth-214	**0.285**		0.0877	0.0923		0.0872	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Cesium-137	0.000	U	0.0457	0.0457		0.0924	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Cobalt-60	-0.00443	U	0.00799	0.00800		0.0792	pCi/g	08/19/21 11:02	09/12/21 19:05	1

Client Sample ID: FSS-029-081321

Lab Sample ID: 160-43084-13

Date Collected: 08/13/21 09:00

Matrix: Solid

Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0598	U	0.0902	0.0904		0.114	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Europium-154	0.00817	U	0.00999	0.0100		0.105	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Europium-155	-0.000837	U	0.129	0.129		0.375	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Lead-212	**0.448**		0.0717	0.0915		0.0624	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Lead-214	**0.290**		0.0767	0.0822		0.108	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Potassium-40	**5.57**		0.933	1.09		0.586	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Radium-226	**0.285**		0.0877	0.0923	0.200	0.0872	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Sodium-22	-0.0545	U	0.0581	0.0584		0.0959	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Thorium-232	**0.452**		0.114	0.123		0.161	pCi/g	08/19/21 11:02	09/12/21 19:05	1
Zinc-65	0.000	U	0.0515	0.0515		0.206	pCi/g	08/19/21 11:02	09/12/21 19:05	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/12/21 19:05*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.48**		0.813	0.826	5.00	1.34	pCi/g	08/26/21 14:26	09/12/21 09:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*100*		*40 - 110*	*08/26/21 14:26*	*09/12/21 09:50*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.897	U	1.95	1.95	5.00	3.47	pCi/g	08/26/21 13:52	09/10/21 01:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*50.5*		*30 - 110*	*08/26/21 13:52*	*09/10/21 01:14*	*1*

Client Sample ID: FSS-029-081321

Lab Sample ID: 160-43084-13

Date Collected: 08/13/21 09:00

Matrix: Solid

Date Received: 08/14/21 09:20

Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.9**		0.24	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 06:28	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**26**		19	6.2	ug/Kg	☼	09/03/21 16:10	09/03/21 19:44	1

Client Sample ID: FSS-030-081321

Date Collected: 08/13/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-14

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0765	U	0.181	0.181	3.00	0.318	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.2*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*93.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.139	U	0.207	0.208	1.00	0.360	pCi/g	08/31/21 13:32	09/09/21 04:19	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00338	U	0.0509	0.0509	1.00	0.123	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.000	U	0.0297	0.0297	1.00	0.0904	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*49.0*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0871	U	0.0932	0.0935	1.00	0.151	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.00747	U	0.0311	0.0311	1.00	0.0837	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	0.0809	U	0.0677	0.0681	1.00	0.0852	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*56.8*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0437	U	0.719	0.719	5.00	1.29	pCi/g	09/14/21 15:20	09/17/21 05:02	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.189**		0.102	0.104		0.146	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Americium-241	0.0543	U	0.136	0.136		0.233	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Bismuth-212	-0.333	U	0.764	0.765		1.33	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Bismuth-214	**0.220**		0.0933	0.0960		0.0881	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Cesium-137	-0.00281	U	0.0470	0.0470		0.0944	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Cobalt-60	0.0240	U	0.0157	0.0158		0.0597	pCi/g	08/19/21 11:02	09/12/21 19:06	1

Client Sample ID: FSS-030-081321

Lab Sample ID: 160-43084-14
Date Collected: 08/13/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.00964	U	0.0173	0.0173		0.172	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Europium-154	0.0731	U	0.0945	0.0948		0.114	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Europium-155	-0.00433	U	0.147	0.147		0.307	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Lead-212	**0.241**		0.0773	0.0831		0.104	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Lead-214	**0.189**		0.103	0.105		0.161	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Potassium-40	**3.32**		0.830	0.895		0.688	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Radium-226	**0.220**		0.0933	0.0960	0.200	0.0881	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Sodium-22	0.00714	U	0.0295	0.0295		0.0577	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Thorium-232	**0.189**		0.102	0.104		0.146	pCi/g	08/19/21 11:02	09/12/21 19:06	1
Zinc-65	-0.00425	U	0.130	0.130		0.165	pCi/g	08/19/21 11:02	09/12/21 19:06	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/12/21 19:06*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.13	U	0.783	0.791	5.00	1.31	pCi/g	08/26/21 14:26	09/12/21 10:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.3*		*40 - 110*	*08/26/21 14:26*	*09/12/21 10:56*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.000	U	2.09	2.09	5.00	3.67	pCi/g	08/26/21 13:52	09/10/21 02:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*49.0*		*30 - 110*	*08/26/21 13:52*	*09/10/21 02:20*	*1*

Client Sample ID: FSS-030-081321

Lab Sample ID: 160-43084-14
Date Collected: 08/13/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 97.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.9**		0.24	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 06:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/03/21 16:10	09/03/21 19:46	1

Client Sample ID: FSS-031-081321

Date Collected: 08/13/21 09:00
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-15

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.354**		0.203	0.205	3.00	0.312	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.5*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*89.0*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.138	U	0.208	0.208	1.00	0.362	pCi/g	08/31/21 13:32	09/09/21 04:42	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0277	U	0.0181	0.0182	1.00	0.105	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.0339	U	0.0423	0.0424	1.00	0.0596	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*55.3*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.111**		0.0762	0.0767	1.00	0.0928	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.0459	U	0.0522	0.0523	1.00	0.0734	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.105**		0.0691	0.0696	1.00	0.0702	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.2*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0729	U	0.708	0.708	5.00	1.26	pCi/g	09/14/21 15:20	09/17/21 05:25	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.279**		0.0924	0.0965		0.0687	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Americium-241	0.0458	U	0.0966	0.0967		0.166	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Bismuth-212	0.186	U	0.489	0.489		0.865	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Bismuth-214	-0.0148	U	0.102	0.102		0.182	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Cesium-137	0.0182	U	0.0406	0.0406		0.0712	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Cobalt-60	-0.00608	U	0.0410	0.0410		0.0503	pCi/g	08/19/21 11:02	09/12/21 19:07	1

Client Sample ID: FSS-031-081321

Lab Sample ID: 160-43084-15
Date Collected: 08/13/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.107	U	0.0506	0.0518		0.114	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Europium-154	0.0116	U	0.0451	0.0452		0.0792	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Europium-155	0.0169	U	0.0635	0.0635		0.385	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Lead-212	**0.206**		0.0527	0.0588		0.0571	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Lead-214	**0.168**		0.0948	0.0964		0.103	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Potassium-40	**2.65**		0.612	0.667		0.271	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Radium-226	-0.0148	U	0.102	0.102	0.200	0.182	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Sodium-22	**0.0387**		0.0229	0.0232		0.0260	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Thorium-232	**0.279**		0.0924	0.0965		0.0687	pCi/g	08/19/21 11:02	09/12/21 19:07	1
Zinc-65	0.000	U	0.0123	0.0123		0.141	pCi/g	08/19/21 11:02	09/12/21 19:07	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0965*		*0.0345*	*0.0358*		*0.0265*	*pCi/g*	*08/19/21 11:02*	*09/12/21 19:07*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.10	U	0.803	0.811	5.00	1.35	pCi/g	08/26/21 14:26	09/12/21 12:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.6*		*40 - 110*	*08/26/21 14:26*	*09/12/21 12:02*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0796	U	1.79	1.79	5.00	3.08	pCi/g	08/26/21 13:52	09/10/21 03:26	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*55.3*		*30 - 110*	*08/26/21 13:52*	*09/10/21 03:26*	*1*

Client Sample ID: FSS-031-081321

Lab Sample ID: 160-43084-15
Date Collected: 08/13/21 09:00
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.0**		0.22	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 06:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:49	1

Client Sample ID: FSS-032-081321

Date Collected: 08/13/21 10:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-16

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.144	U	0.178	0.179	3.00	0.302	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*89.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.251	U	0.192	0.193	1.00	0.299	pCi/g	08/31/21 13:36	09/03/21 11:23	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0253	U	0.0525	0.0526	1.00	0.102	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	**0.0337**		0.0382	0.0383	1.00	0.0337	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*58.1*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.375**		0.132	0.135	1.00	0.111	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.0261	U	0.0461	0.0462	1.00	0.0872	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.246**		0.101	0.103	1.00	0.0587	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*67.3*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.493	U	0.732	0.734	5.00	1.26	pCi/g	09/14/21 15:20	09/17/21 05:48	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.835**		0.198	0.215		0.0904	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Americium-241	0.0945	U	0.164	0.164		0.279	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Bismuth-212	0.0193	U	0.761	0.761		1.38	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Bismuth-214	**0.406**		0.145	0.151		0.132	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Cesium-137	0.0403	U	0.0623	0.0624		0.106	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Cobalt-60	0.0301	U	0.0241	0.0243		0.0370	pCi/g	08/19/21 11:02	09/12/21 19:08	1

Client Sample ID: FSS-032-081321

Lab Sample ID: 160-43084-16
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.126	U	0.182	0.182		0.159	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Europium-154	**0.157**		0.0580	0.0602		0.108	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Europium-155	-0.149	U	0.199	0.199		0.751	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Lead-212	**0.661**		0.117	0.144		0.149	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Lead-214	**0.504**		0.116	0.127		0.133	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Potassium-40	**3.86**		0.915	0.993		0.587	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Radium-226	**0.406**		0.145	0.151	0.200	0.132	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Sodium-22	-0.00161	U	0.0341	0.0341		0.0697	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Thorium-232	**0.835**		0.198	0.215		0.0904	pCi/g	08/19/21 11:02	09/12/21 19:08	1
Zinc-65	-0.0222	U	0.0689	0.0689		0.280	pCi/g	08/19/21 11:02	09/12/21 19:08	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.270*		*0.0692*	*0.0744*		*0.0572*	*pCi/g*	*08/19/21 11:02*	*09/12/21 19:08*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.935	U	0.857	0.862	5.00	1.48	pCi/g	08/26/21 14:26	09/12/21 13:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.0*		*40 - 110*	*08/26/21 14:26*	*09/12/21 13:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.374	U	1.64	1.64	5.00	2.86	pCi/g	08/26/21 13:52	09/10/21 04:33	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*58.1*		*30 - 110*	*08/26/21 13:52*	*09/10/21 04:33*	*1*

Client Sample ID: FSS-032-081321

Lab Sample ID: 160-43084-16
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.93**		0.29	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 06:46	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/03/21 16:10	09/03/21 19:51	1

Client Sample ID: FSS-033-081321

Date Collected: 08/13/21 10:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-17

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.235	U	0.224	0.225	3.00	0.371	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.3*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**0.379**		0.212	0.215	1.00	0.317	pCi/g	08/31/21 13:36	09/03/21 11:46	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00282	U	0.0254	0.0254	1.00	0.0803	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	0.00283	U	0.0242	0.0242	1.00	0.0699	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.8*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.133**		0.0728	0.0736	1.00	0.0554	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.00308	U	0.0263	0.0263	1.00	0.0761	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.165**		0.0799	0.0810	1.00	0.0477	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.3*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.05	U	0.783	0.791	5.00	1.28	pCi/g	09/14/21 15:20	09/17/21 06:11	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0646	U	0.182	0.182		0.207	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Americium-241	0.0575	U	0.0953	0.0954		0.162	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Bismuth-212	-0.265	U	0.564	0.564		0.988	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Bismuth-214	-0.0244	U	0.114	0.114		0.235	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Cesium-137	**0.405**		0.0669	0.0786		0.0212	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Cobalt-60	-0.00315	U	0.00542	0.00543		0.0887	pCi/g	08/19/21 11:02	09/12/21 19:46	1

Client Sample ID: FSS-033-081321

Lab Sample ID: 160-43084-17
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	**0.193**		0.0945	0.0965		0.108	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Europium-154	-0.00641	U	0.0526	0.0526		0.0921	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Europium-155	0.0847	U	0.285	0.286		0.485	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Lead-212	**0.297**		0.0928	0.100		0.0813	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Lead-214	-0.00502	U	0.151	0.151		0.263	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Potassium-40	**2.51**		0.718	0.760		0.538	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Radium-226	-0.0244	U	0.114	0.114	0.200	0.235	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Sodium-22	-0.00147	U	0.0312	0.0312		0.0638	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Thorium-232	0.0646	U	0.182	0.182		0.207	pCi/g	08/19/21 11:02	09/12/21 19:46	1
Zinc-65	-0.0203	U	0.101	0.101		0.176	pCi/g	08/19/21 11:02	09/12/21 19:46	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/12/21 19:46*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.70**		0.807	0.825	5.00	1.31	pCi/g	08/26/21 14:26	09/12/21 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*107*		*40 - 110*	*08/26/21 14:26*	*09/12/21 14:15*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.24	U	1.65	1.65	5.00	3.04	pCi/g	08/26/21 13:52	09/10/21 05:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*61.8*		*30 - 110*	*08/26/21 13:52*	*09/10/21 05:39*	*1*

Client Sample ID: FSS-033-081321

Lab Sample ID: 160-43084-17
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 97.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.84**		0.21	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 06:49	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/03/21 16:10	09/03/21 19:54	1

Client Sample ID: FSS-034-081321

Date Collected: 08/13/21 10:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-18

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.126	U	0.182	0.182	3.00	0.312	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*91.2*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.244	U	0.197	0.198	1.00	0.311	pCi/g	08/31/21 13:36	09/03/21 12:09	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0226	U	0.0469	0.0469	1.00	0.0913	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	-0.0100	U	0.0241	0.0241	1.00	0.0824	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*73.4*		*30 - 110*	*08/21/21 12:59*	*09/03/21 14:01*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.136**		0.0764	0.0773	1.00	0.0864	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-235/236	0.0136	U	0.0396	0.0396	1.00	0.0856	pCi/g	08/21/21 14:08	09/02/21 15:02	1
Uranium-238	**0.164**		0.0747	0.0759	1.00	0.0423	pCi/g	08/21/21 14:08	09/02/21 15:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*76.9*		*30 - 110*	*08/21/21 14:08*	*09/02/21 15:02*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.749	U	0.761	0.765	5.00	1.28	pCi/g	09/14/21 15:20	09/17/21 06:33	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.473**		0.146	0.154		0.164	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Americium-241	0.0899	U	0.0838	0.0843		0.100	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Bismuth-212	0.0202	U	0.495	0.495		0.910	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Bismuth-214	**0.259**		0.0943	0.0979		0.0988	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Cesium-137	0.0275	U	0.0518	0.0519		0.0895	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Cobalt-60	-0.0159	U	0.0588	0.0588		0.0676	pCi/g	08/19/21 11:02	09/12/21 19:48	1

Client Sample ID: FSS-034-081321

Lab Sample ID: 160-43084-18
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	**0.111**		0.0604	0.0615		0.109	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Europium-154	0.00742	U	0.0135	0.0135		0.101	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Europium-155	-0.0522	U	0.0759	0.0761		0.192	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Lead-212	**0.401**		0.0740	0.0898		0.0632	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Lead-214	**0.223**		0.0656	0.0695		0.0848	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Potassium-40	**2.00**		0.615	0.646		0.596	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Radium-226	**0.259**		0.0943	0.0979	0.200	0.0988	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Sodium-22	0.00118	U	0.0237	0.0237		0.0490	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Thorium-232	**0.473**		0.146	0.154		0.164	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Zinc-65	0.000	U	0.0123	0.0123		0.230	pCi/g	08/19/21 11:02	09/12/21 19:48	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.180*		*0.0425*	*0.0463*		*0.0292*	*pCi/g*	*08/19/21 11:02*	*09/12/21 19:48*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.989	U	0.744	0.750	5.00	1.25	pCi/g	08/26/21 14:26	09/12/21 15:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*08/26/21 14:26*	*09/12/21 15:21*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.852	U	1.52	1.52	5.00	2.60	pCi/g	08/26/21 13:52	09/10/21 06:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*73.4*		*30 - 110*	*08/26/21 13:52*	*09/10/21 06:45*	*1*

Client Sample ID: FSS-034-081321

Lab Sample ID: 160-43084-18
Date Collected: 08/13/21 10:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 97.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.55**		0.23	0.014	mg/Kg	☼	09/07/21 07:45	09/08/21 06:53	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/03/21 16:10	09/03/21 19:56	1

Client Sample ID: FSS-035-081321

Date Collected: 08/13/21 09:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-19

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.303	U	0.195	0.196	3.00	0.307	pCi/g	09/04/21 14:11	09/25/21 15:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.3*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.244	U	0.205	0.206	1.00	0.330	pCi/g	08/31/21 13:36	09/03/21 12:31	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0338	U	0.0355	0.0356	1.00	0.0492	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	0.0159	U	0.0221	0.0221	1.00	0.0239	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*89.4*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.108**		0.0566	0.0573	1.00	0.0416	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.00693	U	0.0187	0.0187	1.00	0.0447	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.122**		0.0601	0.0609	1.00	0.0415	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*93.1*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.420	U	0.651	0.652	5.00	1.12	pCi/g	09/14/21 15:20	09/17/21 06:56	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0969	U	0.172	0.172		0.236	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Americium-241	0.00477	U	0.0967	0.0967		0.130	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Bismuth-212	0.234	U	0.384	0.385		0.665	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Bismuth-214	0.128	U	0.0649	0.0662		0.225	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Cesium-137	-0.0234	U	0.0432	0.0433		0.0749	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Cobalt-60	0.0154	U	0.0415	0.0415		0.0491	pCi/g	08/19/21 11:02	09/12/21 19:47	1

Client Sample ID: FSS-035-081321

Lab Sample ID: 160-43084-19
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0969	U	0.0951	0.0956		0.124	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Europium-154	0.0666	U	0.0349	0.0355		0.0797	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Europium-155	0.0514	U	0.174	0.174		0.298	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Lead-212	**0.299**		0.0589	0.0700		0.0550	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Lead-214	**0.285**		0.0604	0.0670		0.0699	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Potassium-40	**2.33**		0.567	0.613		0.264	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Radium-226	0.128	U	0.0649	0.0662	0.200	0.225	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Sodium-22	0.0172	U	0.0150	0.0151		0.0253	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Thorium-232	0.0969	U	0.172	0.172		0.236	pCi/g	08/19/21 11:02	09/12/21 19:47	1
Zinc-65	0.000	U	0.0239	0.0239		0.175	pCi/g	08/19/21 11:02	09/12/21 19:47	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0976*		*0.0285*	*0.0302*		*0.0164*	*pCi/g*	*08/19/21 11:02*	*09/12/21 19:47*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.24	U	0.811	0.821	5.00	1.36	pCi/g	08/26/21 14:26	09/12/21 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.5*		*40 - 110*	*08/26/21 14:26*	*09/12/21 16:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.971	U	1.08	1.09	5.00	1.99	pCi/g	08/21/21 14:26	09/11/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*89.4*		*30 - 110*	*08/21/21 14:26*	*09/11/21 13:45*	*1*

Client Sample ID: FSS-035-081321

Lab Sample ID: 160-43084-19
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.40**		0.25	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 06:56	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/03/21 16:10	09/03/21 19:59	1

Client Sample ID: FSS-036-081321

Date Collected: 08/13/21 09:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-20

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0722	U	0.207	0.207	3.00	0.387	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.2*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**0.409**		0.219	0.222	1.00	0.325	pCi/g	08/31/21 13:36	09/03/21 12:54	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0228	U	0.0337	0.0338	1.00	0.0589	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	-0.00622	U	0.00704	0.00706	1.00	0.0513	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*86.5*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.244**		0.0885	0.0908	1.00	0.0742	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.0114	U	0.0265	0.0265	1.00	0.0564	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.130**		0.0610	0.0619	1.00	0.0354	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*93.2*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0165	U	0.691	0.691	5.00	1.25	pCi/g	09/14/21 15:20	09/17/21 07:18	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.306**		0.198	0.201		0.210	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Americium-241	0.0656	U	0.164	0.164		0.281	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Bismuth-212	-0.0201	U	0.576	0.576		1.07	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Bismuth-214	0.108	U	0.0991	0.0997		0.347	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Cesium-137	-0.0283	U	0.115	0.115		0.0857	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Cobalt-60	-0.00160	U	0.0498	0.0498		0.0648	pCi/g	08/19/21 11:02	09/12/21 19:48	1

Client Sample ID: FSS-036-081321

Lab Sample ID: 160-43084-20
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.129	U	0.0673	0.0686		0.183	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Europium-154	0.0616	U	0.0967	0.0969		0.118	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Europium-155	0.0179	U	0.0486	0.0486		0.219	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Lead-212	**0.339**		0.0963	0.105		0.106	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Lead-214	0.0716	U	0.126	0.126		0.199	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Potassium-40	0.996	U	1.04	1.04		1.22	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Radium-226	0.108	U	0.0991	0.0997	0.200	0.347	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Sodium-22	0.000	U	0.00912	0.00912		0.0343	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Thorium-232	**0.306**		0.198	0.201		0.210	pCi/g	08/19/21 11:02	09/12/21 19:48	1
Zinc-65	0.0412	U	0.133	0.133		0.238	pCi/g	08/19/21 11:02	09/12/21 19:48	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.153*		*0.0498*	*0.0521*		*0.0456*	*pCi/g*	*08/19/21 11:02*	*09/12/21 19:48*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.861	U	0.830	0.835	5.00	1.42	pCi/g	08/26/21 14:26	09/12/21 17:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.8*		*40 - 110*	*08/26/21 14:26*	*09/12/21 17:33*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.27	U	1.14	1.15	5.00	2.14	pCi/g	08/21/21 14:26	09/11/21 15:57	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*86.5*		*30 - 110*	*08/21/21 14:26*	*09/11/21 15:57*	*1*

Client Sample ID: FSS-036-081321

Lab Sample ID: 160-43084-20
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.1**		0.30	0.018	mg/Kg	☼	09/07/21 07:45	09/08/21 07:00	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/03/21 16:10	09/03/21 20:42	1

Client Sample ID: FSS-037-081321

Date Collected: 08/13/21 09:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-21

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.156	U	0.194	0.195	3.00	0.329	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.2*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*91.6*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.258	U	0.201	0.203	1.00	0.319	pCi/g	08/31/21 13:36	09/03/21 13:17	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0575	U	0.0507	0.0510	1.00	0.0586	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	-0.00262	U	0.00513	0.00514	1.00	0.0507	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*65.2*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.0970**		0.0564	0.0569	1.00	0.0541	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.00473	U	0.0197	0.0197	1.00	0.0530	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.0474**		0.0399	0.0401	1.00	0.0469	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*89.7*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.149	U	0.714	0.715	5.00	1.28	pCi/g	09/14/21 15:20	09/17/21 07:41	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.339**		0.158	0.162		0.232	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Americium-241	0.0549	U	0.137	0.137		0.235	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Bismuth-212	0.0125	U	0.694	0.694		1.27	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Bismuth-214	-0.00434	U	0.0146	0.0146		0.294	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Cesium-137	0.0198	U	0.0468	0.0468		0.0826	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Cobalt-60	0.00299	U	0.0466	0.0466		0.0603	pCi/g	08/19/21 13:00	09/11/21 09:27	1

Client Sample ID: FSS-037-081321

Lab Sample ID: 160-43084-21
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.136	U	0.118	0.118		0.146	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Europium-154	0.0610	U	0.0990	0.0992		0.105	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Europium-155	-0.00438	U	0.209	0.209		0.312	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Lead-212	**0.328**		0.0872	0.0966		0.112	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Lead-214	**0.332**		0.0944	0.100		0.0820	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Potassium-40	**2.08**		0.836	0.862		0.873	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Radium-226	-0.00434	U	0.0146	0.0146	0.200	0.294	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Sodium-22	0.00721	U	0.0298	0.0298		0.0583	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Thorium-232	**0.339**		0.158	0.162		0.232	pCi/g	08/19/21 13:00	09/11/21 09:27	1
Zinc-65	-0.00430	U	0.0853	0.0853		0.210	pCi/g	08/19/21 13:00	09/11/21 09:27	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.149*		*0.0570*	*0.0589*		*0.0545*	*pCi/g*	*08/19/21 13:00*	*09/11/21 09:27*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.697	U	0.721	0.725	5.00	1.24	pCi/g	08/26/21 14:26	09/12/21 18:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*08/26/21 14:26*	*09/12/21 18:40*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.51	U	1.48	1.49	5.00	2.75	pCi/g	08/21/21 14:26	09/11/21 17:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*65.2*		*30 - 110*	*08/21/21 14:26*	*09/11/21 17:03*	*1*

Client Sample ID: FSS-037-081321

Lab Sample ID: 160-43084-21
Date Collected: 08/13/21 09:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 97.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.59**		0.21	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 07:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	6.0	ug/Kg	☼	09/03/21 16:10	09/03/21 20:45	1

Client Sample ID: FSS-038-081321

Date Collected: 08/13/21 08:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-22

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.121	U	0.187	0.187	3.00	0.355	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.210	U	0.204	0.205	1.00	0.337	pCi/g	08/31/21 13:36	09/03/21 13:39	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0343	U	0.0362	0.0363	1.00	0.0443	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	0.00687	U	0.0185	0.0185	1.00	0.0443	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*75.8*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.176**		0.0749	0.0763	1.00	0.0596	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.000	U	0.00462	0.00462	1.00	0.0283	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.144**		0.0687	0.0697	1.00	0.0620	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.1*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.852	U	0.683	0.689	5.00	1.13	pCi/g	09/14/21 15:20	09/17/21 08:04	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.346**		0.214	0.216		0.208	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Americium-241	0.0327	U	0.135	0.135		0.232	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Bismuth-212	0.0916	U	0.571	0.571		1.04	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Bismuth-214	0.0960	U	0.125	0.126		0.270	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Cesium-137	**0.0829**		0.0372	0.0382		0.0324	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Cobalt-60	0.00493	U	0.00829	0.00830		0.0892	pCi/g	08/19/21 13:00	09/11/21 15:18	1

Client Sample ID: FSS-038-081321
Lab Sample ID: 160-43084-22
Date Collected: 08/13/21 08:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.125	U	0.0874	0.0883		0.135	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Europium-154	0.0448	U	0.0488	0.0491		0.0860	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Europium-155	0.0375	U	0.272	0.272		0.464	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Lead-212	**0.398**		0.124	0.134		0.111	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Lead-214	0.0525	U	0.135	0.135		0.248	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Potassium-40	**4.45**		0.933	1.03		0.541	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Radium-226	0.0960	U	0.125	0.126	0.200	0.270	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Sodium-22	-0.00148	U	0.0314	0.0314		0.0641	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Thorium-232	**0.346**		0.214	0.216		0.208	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Zinc-65	0.0383	U	0.107	0.107		0.191	pCi/g	08/19/21 13:00	09/11/21 15:18	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.113*		*0.0516*	*0.0529*		*0.0537*	*pCi/g*	*08/19/21 13:00*	*09/11/21 15:18*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.42**		0.842	0.854	5.00	1.39	pCi/g	08/26/21 14:26	09/12/21 19:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*95.3*		*40 - 110*	*08/26/21 14:26*	*09/12/21 19:46*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.296	U	1.41	1.41	5.00	2.55	pCi/g	08/21/21 14:26	09/11/21 18:10	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*75.8*		*30 - 110*	*08/21/21 14:26*	*09/11/21 18:10*	*1*

Client Sample ID: FSS-038-081321
Lab Sample ID: 160-43084-22
Date Collected: 08/13/21 08:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 79.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.9**		0.28	0.017	mg/Kg	☼	09/07/21 07:45	09/08/21 07:07	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	23	7.6	ug/Kg	☼	09/03/21 16:10	09/03/21 20:47	1

Client Sample ID: FSS-039-081321

Date Collected: 08/13/21 08:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-23

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0586	U	0.173	0.173	3.00	0.324	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.228	U	0.213	0.214	1.00	0.348	pCi/g	08/31/21 13:36	09/03/21 14:02	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00239	U	0.00469	0.00470	1.00	0.0464	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	0.00959	U	0.0188	0.0188	1.00	0.0288	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*73.8*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.141**		0.0773	0.0782	1.00	0.0889	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.0288	U	0.0359	0.0359	1.00	0.0506	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.151**		0.0721	0.0732	1.00	0.0560	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.5*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.592	U	0.744	0.746	5.00	1.26	pCi/g	09/14/21 15:20	09/17/21 08:26	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.284**		0.0983	0.102		0.0654	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Americium-241	0.0425	U	0.0997	0.0998		0.171	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Bismuth-212	-0.226	U	0.562	0.563		0.985	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Bismuth-214	**0.230**		0.0909	0.0939		0.0880	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Cesium-137	-0.00526	U	0.0543	0.0543		0.0969	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Cobalt-60	-0.0301	U	0.0786	0.0787		0.0865	pCi/g	08/19/21 13:00	09/11/21 15:16	1

Client Sample ID: FSS-039-081321
Lab Sample ID: 160-43084-23
Date Collected: 08/13/21 08:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0800	U	0.116	0.117		0.103	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Europium-154	**0.0970**		0.0475	0.0486		0.0768	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Europium-155	0.0385	U	0.0921	0.0922		0.159	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Lead-212	**0.239**		0.0509	0.0592		0.0445	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Lead-214	**0.181**		0.0732	0.0754		0.0712	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Potassium-40	**3.11**		0.709	0.775		0.563	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Radium-226	**0.230**		0.0909	0.0939	0.200	0.0880	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Sodium-22	0.0156	U	0.0344	0.0344		0.0617	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Thorium-232	**0.284**		0.0983	0.102		0.0654	pCi/g	08/19/21 13:00	09/11/21 15:16	1
Zinc-65	0.000	U	0.0286	0.0286		0.180	pCi/g	08/19/21 13:00	09/11/21 15:16	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.109*		*0.0337*	*0.0354*		*0.0276*	*pCi/g*	*08/19/21 13:00*	*09/11/21 15:16*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.821	U	0.827	0.832	5.00	1.42	pCi/g	08/26/21 14:26	09/12/21 20:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.5*		*40 - 110*	*08/26/21 14:26*	*09/12/21 20:52*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.37	U	1.33	1.34	5.00	2.47	pCi/g	08/21/21 14:26	09/11/21 19:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*73.8*		*30 - 110*	*08/21/21 14:26*	*09/11/21 19:16*	*1*

Client Sample ID: FSS-039-081321
Lab Sample ID: 160-43084-23
Date Collected: 08/13/21 08:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.8**		0.24	0.015	mg/Kg	☼	09/07/21 07:45	09/08/21 07:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/03/21 16:10	09/03/21 20:50	1

Client Sample ID: FSS-040-081321

Date Collected: 08/13/21 08:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-24

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0256	U	0.167	0.167	3.00	0.302	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.3*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*93.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.253	U	0.206	0.207	1.00	0.331	pCi/g	08/31/21 13:36	09/03/21 14:25	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0573	U	0.0504	0.0506	1.00	0.0638	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	-0.00239	U	0.00468	0.00469	1.00	0.0463	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*74.6*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.169**		0.0742	0.0755	1.00	0.0462	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.00256	U	0.0219	0.0219	1.00	0.0634	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.171**		0.0740	0.0753	1.00	0.0398	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.8*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.703	U	0.787	0.791	5.00	1.33	pCi/g	09/14/21 15:20	09/17/21 08:49	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.308**		0.0812	0.0868		0.114	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Americium-241	0.0428	U	0.0942	0.0943		0.162	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Bismuth-212	0.159	U	0.395	0.395		0.702	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Bismuth-214	0.0659	U	0.0773	0.0776		0.215	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Cesium-137	-0.0124	U	0.0380	0.0381		0.0678	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Cobalt-60	-0.00795	U	0.0537	0.0537		0.0627	pCi/g	08/19/21 13:00	09/11/21 15:18	1

Client Sample ID: FSS-040-081321

Date Collected: 08/13/21 08:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-24

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0405	U	0.0397	0.0399		0.130	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Europium-154	-0.000624	U	0.00132	0.00132		0.0934	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Europium-155	0.0149	U	0.0767	0.0767		0.307	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Lead-212	**0.228**		0.0510	0.0586		0.0497	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Lead-214	**0.204**		0.0589	0.0625		0.0832	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Potassium-40	**3.71**		0.700	0.793		0.253	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Radium-226	0.0659	U	0.0773	0.0776	0.200	0.215	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Sodium-22	0.00877	U	0.0337	0.0337		0.0627	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Thorium-232	**0.308**		0.0812	0.0868		0.114	pCi/g	08/19/21 13:00	09/11/21 15:18	1
Zinc-65	0.0394	U	0.0769	0.0770		0.135	pCi/g	08/19/21 13:00	09/11/21 15:18	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 13:00*	*09/11/21 15:18*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.31	U	0.803	0.814	5.00	1.34	pCi/g	08/26/21 14:26	09/12/21 21:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*08/26/21 14:26*	*09/12/21 21:58*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.839	U	1.37	1.37	5.00	2.51	pCi/g	08/21/21 14:26	09/11/21 20:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*74.6*		*30 - 110*	*08/21/21 14:26*	*09/11/21 20:22*	*1*

Client Sample ID: FSS-040-081321

Date Collected: 08/13/21 08:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-24

Matrix: Solid
Percent Solids: 96.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.0**		0.21	0.013	mg/Kg	☼	09/07/21 07:45	09/08/21 07:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/03/21 16:10	09/03/21 20:52	1

Client Sample ID: FSS-041-081321

Date Collected: 08/13/21 11:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-25

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0959	U	0.179	0.179	3.00	0.311	pCi/g	09/04/21 14:11	09/25/21 15:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.1*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*
Y Carrier	*92.7*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:48*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.258	U	0.203	0.204	1.00	0.323	pCi/g	08/31/21 13:36	09/03/21 14:47	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0175	U	0.0255	0.0255	1.00	0.0911	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	0.0100	U	0.0295	0.0295	1.00	0.0669	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*68.3*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.0940**		0.0556	0.0561	1.00	0.0256	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.000	U	0.00521	0.00521	1.00	0.0319	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	**0.0704**		0.0507	0.0510	1.00	0.0528	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.8*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.482	U	0.763	0.764	5.00	1.31	pCi/g	09/14/21 15:20	09/17/21 09:12	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0985	U	0.180	0.180		0.216	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Americium-241	-0.0646	U	0.114	0.114		0.195	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Bismuth-212	-0.343	U	0.685	0.686		1.19	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Bismuth-214	0.0999	U	0.0607	0.0616		0.278	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Cesium-137	0.0150	U	0.0614	0.0614		0.109	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Cobalt-60	**0.0359**		0.0179	0.0182		0.0354	pCi/g	08/19/21 13:00	09/11/21 15:54	1

Client Sample ID: FSS-041-081321

Lab Sample ID: 160-43084-25
Matrix: Solid
Date Collected: 08/13/21 11:30
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	**0.258**		0.113	0.116		0.102	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Europium-154	0.0327	U	0.0242	0.0245		0.0810	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Europium-155	-0.000498	U	0.229	0.229		0.373	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Lead-212	0.0227	U	0.0811	0.0812		0.140	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Lead-214	0.0155	U	0.0382	0.0382		0.246	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Potassium-40	**1.33**		0.566	0.581		0.561	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Radium-226	0.0999	U	0.0607	0.0616	0.200	0.278	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Sodium-22	-0.0154	U	0.0384	0.0384		0.0707	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Thorium-232	0.0985	U	0.180	0.180		0.216	pCi/g	08/19/21 13:00	09/11/21 15:54	1
Zinc-65	-0.0212	U	0.108	0.108		0.201	pCi/g	08/19/21 13:00	09/11/21 15:54	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 13:00*	*09/11/21 15:54*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.745	U	0.785	0.788	5.00	1.35	pCi/g	08/26/21 14:26	09/12/21 23:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.4*		*40 - 110*	*08/26/21 14:26*	*09/12/21 23:04*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.18	U	1.44	1.44	5.00	2.63	pCi/g	08/21/21 14:26	09/11/21 21:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*68.3*		*30 - 110*	*08/21/21 14:26*	*09/11/21 21:28*	*1*

Client Sample ID: FSS-041-081321

Lab Sample ID: 160-43084-25
Matrix: Solid
Date Collected: 08/13/21 11:30
Percent Solids: 96.5
Date Received: 08/14/21 09:20

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.73**		0.25	0.015	mg/Kg	☼	09/01/21 14:58	09/02/21 11:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.6	ug/Kg	☼	09/03/21 16:10	09/03/21 20:55	1

Client Sample ID: FSS-042-081321

Date Collected: 08/13/21 11:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-26

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0893	U	0.198	0.198	3.00	0.345	pCi/g	09/04/21 14:31	09/20/21 14:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.6*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.295	U	0.209	0.211	1.00	0.328	pCi/g	08/31/21 13:36	09/03/21 15:10	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0196	U	0.0468	0.0468	1.00	0.0952	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	-0.00280	U	0.00548	0.00549	1.00	0.0541	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.8*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.0992**		0.0652	0.0657	1.00	0.0663	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.0123	U	0.0242	0.0242	1.00	0.0370	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	0.0446	U	0.0439	0.0441	1.00	0.0555	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.1*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.589	U	0.774	0.776	5.00	1.33	pCi/g	09/14/21 15:20	09/17/21 09:34	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0737	U	0.110	0.110		0.157	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Americium-241	0.0331	U	0.0700	0.0701		0.121	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Bismuth-212	-0.208	U	0.453	0.454		0.796	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Bismuth-214	**0.184**		0.0838	0.0858		0.0891	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Cesium-137	**0.0631**		0.0350	0.0356		0.0492	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Cobalt-60	-0.0281	U	0.0695	0.0695		0.0771	pCi/g	08/19/21 13:00	09/11/21 15:53	1

Client Sample ID: FSS-042-081321
Lab Sample ID: 160-43084-26
Date Collected: 08/13/21 11:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0322	U	0.0464	0.0465		0.111	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Europium-154	0.0366	U	0.0695	0.0696		0.0776	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Europium-155	-0.0620	U	0.0823	0.0826		0.368	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Lead-212	**0.131**		0.0430	0.0461		0.0505	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Lead-214	**0.184**		0.0696	0.0721		0.0703	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Potassium-40	**2.09**		0.735	0.764		0.720	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Radium-226	**0.184**		0.0838	0.0858	0.200	0.0891	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Sodium-22	-0.0272	U	0.0431	0.0432		0.0745	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Thorium-232	0.0737	U	0.110	0.110		0.157	pCi/g	08/19/21 13:00	09/11/21 15:53	1
Zinc-65	0.000	U	0.0410	0.0410		0.163	pCi/g	08/19/21 13:00	09/11/21 15:53	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0752*		*0.0352*	*0.0360*		*0.0363*	*pCi/g*	*08/19/21 13:00*	*09/11/21 15:53*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.998	U	0.959	0.964	5.00	1.62	pCi/g	09/08/21 16:09	09/17/21 04:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.6*		*40 - 110*	*09/08/21 16:09*	*09/17/21 04:12*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.12	U	1.65	1.66	5.00	3.05	pCi/g	08/21/21 14:26	09/11/21 22:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*62.8*		*30 - 110*	*08/21/21 14:26*	*09/11/21 22:34*	*1*

Client Sample ID: FSS-042-081321
Lab Sample ID: 160-43084-26
Date Collected: 08/13/21 11:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.54**		0.25	0.015	mg/Kg	☼	09/01/21 14:58	09/02/21 11:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/03/21 16:10	09/03/21 20:57	1

Client Sample ID: FSS-043-081321

Date Collected: 08/13/21 11:30
Date Received: 08/14/21 09:20

Lab Sample ID: 160-43084-27

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0244	U	0.195	0.195	3.00	0.359	pCi/g	09/04/21 14:31	09/20/21 14:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.2*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**0.347**		0.220	0.222	1.00	0.340	pCi/g	08/31/21 13:36	09/03/21 15:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00759	U	0.0238	0.0238	1.00	0.0797	pCi/g	09/11/21 13:28	09/20/21 20:52	1
Plutonium-239/240	0.00760	U	0.0205	0.0205	1.00	0.0491	pCi/g	09/11/21 13:28	09/20/21 20:52	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.8*		*30 - 110*	*09/11/21 13:28*	*09/20/21 20:52*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.0884**		0.0550	0.0555	1.00	0.0472	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	0.0105	U	0.0205	0.0206	1.00	0.0314	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	0.0441	U	0.0410	0.0411	1.00	0.0520	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.5*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.574	U	0.762	0.764	5.00	1.30	pCi/g	09/14/21 15:20	09/17/21 09:57	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.144**		0.0973	0.0984		0.108	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Americium-241	-0.0518	U	0.114	0.114		0.194	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Bismuth-212	0.209	U	0.416	0.416		0.727	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Bismuth-214	0.0507	U	0.0639	0.0642		0.139	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Cesium-137	0.0120	U	0.0223	0.0223		0.0394	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Cobalt-60	0.000	U	0.00894	0.00894		0.0238	pCi/g	08/19/21 13:00	09/11/21 15:52	1

Client Sample ID: FSS-043-081321

Lab Sample ID: 160-43084-27
Date Collected: 08/13/21 11:30
Matrix: Solid
Date Received: 08/14/21 09:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-152	0.0415	U	0.0508	0.0510		0.118	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Europium-154	0.0457	U	0.0584	0.0586		0.0627	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Europium-155	-0.0278	U	0.160	0.160		0.276	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Lead-212	**0.175**		0.0454	0.0505		0.0487	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Lead-214	**0.178**		0.0566	0.0595		0.0557	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Potassium-40	**1.79**		0.605	0.631		0.459	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Radium-226	0.0507	U	0.0639	0.0642	0.200	0.139	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Sodium-22	0.0187	U	0.0149	0.0151		0.0229	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Thorium-232	**0.144**		0.0973	0.0984		0.108	pCi/g	08/19/21 13:00	09/11/21 15:52	1
Zinc-65	-0.0613	U	0.111	0.111		0.192	pCi/g	08/19/21 13:00	09/11/21 15:52	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0625*		*0.0220*	*0.0229*		*0.0149*	*pCi/g*	*08/19/21 13:00*	*09/11/21 15:52*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.785	U	0.886	0.890	5.00	1.51	pCi/g	09/08/21 16:09	09/17/21 05:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*09/08/21 16:09*	*09/17/21 05:18*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.07	U	1.39	1.40	5.00	2.41	pCi/g	09/12/21 17:27	09/23/21 18:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.8*		*30 - 110*	*09/12/21 17:27*	*09/23/21 18:29*	*1*

Client Sample ID: FSS-043-081321

Lab Sample ID: 160-43084-27
Date Collected: 08/13/21 11:30
Matrix: Solid
Date Received: 08/14/21 09:20
Percent Solids: 93.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.79**		0.24	0.015	mg/Kg	☼	09/01/21 14:58	09/02/21 11:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/03/21 16:10	09/03/21 21:00	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-548182/1-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548182

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0584	J	0.30	0.018	mg/Kg		09/07/21 07:45	09/08/21 03:36	1

Lab Sample ID: LCS 280-548182/2-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	17.8		mg/Kg		89	84 - 118

Lab Sample ID: LCSD 280-548182/3-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	20.0	17.2		mg/Kg		86	84 - 118	3	20

Lab Sample ID: 160-43079-C-1-I MS
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	14	J1	17.6	25.6	J1	mg/Kg	☼	68	84 - 118

Lab Sample ID: 160-43079-C-1-J MSD
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 548182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	14	J1	16.4	37.7	J1	mg/Kg	☼	147	84 - 118	38	20

Lab Sample ID: MB 280-548183/1-A
Matrix: Solid
Analysis Batch: 548709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548183

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/01/21 14:58	09/02/21 10:47	1

Lab Sample ID: LCS 280-548183/2-A
Matrix: Solid
Analysis Batch: 548709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.1		mg/Kg		96	84 - 118

Lab Sample ID: 160-43084-25 MS
Matrix: Solid
Analysis Batch: 548709

Client Sample ID: FSS-041-081321
Prep Type: Total/NA
Prep Batch: 548183

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.73		16.3	16.2		mg/Kg	☼	95	84 - 118

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 160-43084-25 MSD
Matrix: Solid
Analysis Batch: 548709

Client Sample ID: FSS-041-081321
Prep Type: Total/NA
Prep Batch: 548183

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.73		17.2	17.6		mg/Kg	☼	98	84 - 118	9	20

Lab Sample ID: MB 280-548184/1-A
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548184

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/07/21 07:45	09/08/21 05:32	1

Lab Sample ID: LCS 280-548184/2-A
Matrix: Solid
Analysis Batch: 549199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	17.5		mg/Kg		88	84 - 118

Lab Sample ID: 160-43084-5 MS
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: FSS-021-081221
Prep Type: Total/NA
Prep Batch: 548184

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.70		14.4	13.6		mg/Kg	☼	90	84 - 118

Lab Sample ID: 160-43084-5 MSD
Matrix: Solid
Analysis Batch: 549084

Client Sample ID: FSS-021-081221
Prep Type: Total/NA
Prep Batch: 548184

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.70		15.8	14.1		mg/Kg	☼	85	84 - 118	3	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-548521/1-A
Matrix: Solid
Analysis Batch: 548867

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548521

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/03/21 16:10	09/03/21 18:45	1

Lab Sample ID: LCS 280-548521/2-A
Matrix: Solid
Analysis Batch: 548867

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548521

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	338		ug/Kg		101	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-548521/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548521**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			333	341		ug/Kg		102	80 - 124	1	20

Lab Sample ID: 160-43084-1 MS — **Client Sample ID: FSS-017-081221**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548521**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	348	360		ug/Kg	☼	103	80 - 124

Lab Sample ID: 160-43084-1 MSD — **Client Sample ID: FSS-017-081221**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548521**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	348	356		ug/Kg	☼	102	80 - 124	1	20

Lab Sample ID: MB 280-548691/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548691**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/03/21 16:10	09/03/21 20:04	1

Lab Sample ID: LCS 280-548691/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548691**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg			333	341		ug/Kg		102	80 - 124

Lab Sample ID: LCSD 280-548691/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548691**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			333	342		ug/Kg		103	80 - 124	0	20

Lab Sample ID: 280-152257-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548691**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	356	363		ug/Kg	☼	102	80 - 124

Lab Sample ID: 280-152257-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 548867 — **Prep Batch: 548691**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	350	348		ug/Kg	☼	99	80 - 124	4	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-524352/23-A
Matrix: Solid
Analysis Batch: 525785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524352

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.009816	U	0.147	0.147	3.00	0.273	pCi/g	08/27/21 13:56	09/07/21 17:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*89.9*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*
Y Carrier	*93.1*		*40 - 110*	*08/27/21 13:56*	*09/07/21 17:26*	*1*

Lab Sample ID: LCS 160-524352/1-A
Matrix: Solid
Analysis Batch: 525699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524352

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.63	7.574		0.804	3.00	0.284	pCi/g	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*86.9*		*40 - 110*
Y Carrier	*92.7*		*40 - 110*

Lab Sample ID: 160-43079-A-2-F DU
Matrix: Solid
Analysis Batch: 525699

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524352

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.117	U		0.8691		0.291	3.00	0.399	pCi/g			4.41	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*77.8*		*40 - 110*
Y Carrier	*93.8*		*40 - 110*

Lab Sample ID: MB 160-525600/1-A
Matrix: Solid
Analysis Batch: 528884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525600

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1515	U	0.235	0.236	3.00	0.404	pCi/g	09/04/21 14:11	09/25/21 15:44	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.2*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*
Y Carrier	*80.0*		*40 - 110*	*09/04/21 14:11*	*09/25/21 15:44*	*1*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: LCS 160-525600/2-A
Matrix: Solid
Analysis Batch: 528884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525600

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.62	8.082		0.901	3.00	0.381	pCi/g	106	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*73.1*		*40 - 110*
Y Carrier	*83.4*		*40 - 110*

Lab Sample ID: 160-43084-6 DU
Matrix: Solid
Analysis Batch: 528884

Client Sample ID: FSS-022-081221
Prep Type: Total/NA
Prep Batch: 525600

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.179	U		0.2872	U	0.205	3.00	0.325	pCi/g			0.74	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*86.4*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Lab Sample ID: MB 160-525601/1-A
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525601

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.03829	U	0.174	0.174	3.00	0.312	pCi/g	09/04/21 14:31	09/20/21 14:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*
Y Carrier	*89.3*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*

Lab Sample ID: LCS 160-525601/2-A
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525601

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.62	7.387		0.781	3.00	0.284	pCi/g	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.8*		*40 - 110*
Y Carrier	*90.5*		*40 - 110*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: 160-43084-26 DU
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: FSS-042-081321
Prep Type: Total/NA
Prep Batch: 525601

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0893	U		-0.00732 0	U	0.203	3.00	0.370	pCi/g			0.67	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*81.7*		*40 - 110*
Y Carrier	*91.6*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-524988/1-A
Matrix: Solid
Analysis Batch: 526047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524988

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.07207	U	0.201	0.201	1.00	0.363	pCi/g	08/31/21 13:32	09/08/21 22:40	1

Lab Sample ID: LCS 160-524988/2-A
Matrix: Solid
Analysis Batch: 526047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524988

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.62	7.842		0.926	1.00	0.359	pCi/g	103	79 - 125		

Lab Sample ID: 160-43084-14 MS
Matrix: Solid
Analysis Batch: 526047

Client Sample ID: FSS-030-081321
Prep Type: Total/NA
Prep Batch: 524988

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.139	U	7.48	7.523		0.884	1.00	0.338	pCi/g	99	78 - 122		

Lab Sample ID: 160-43084-15 DU
Matrix: Solid
Analysis Batch: 526047

Client Sample ID: FSS-031-081321
Prep Type: Total/NA
Prep Batch: 524988

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.138	U		0.2702	U	0.220	1.00	0.352	pCi/g			0.86	3

Lab Sample ID: MB 160-524989/1-A
Matrix: Solid
Analysis Batch: 525579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524989

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.3345		0.215	0.217	1.00	0.332	pCi/g	08/31/21 13:36	09/03/21 10:38	1

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: LCS 160-524989/2-A
Matrix: Solid
Analysis Batch: 525579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524989

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.63	7.680		0.882	1.00	0.311	pCi/g	101	79 - 125		

Lab Sample ID: 160-43084-26 MS
Matrix: Solid
Analysis Batch: 525579

Client Sample ID: FSS-042-081321
Prep Type: Total/NA
Prep Batch: 524989

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.295	U	7.61	7.900		0.919	1.00	0.337	pCi/g	100	78 - 122		

Lab Sample ID: 160-43084-27 DU
Matrix: Solid
Analysis Batch: 525579

Client Sample ID: FSS-043-081321
Prep Type: Total/NA
Prep Batch: 524989

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.347			0.1640	U	0.196	1.00	0.328	pCi/g			1.21	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-523551/1-A
Matrix: Solid
Analysis Batch: 525355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523551

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01468	U	0.0555	0.0555	1.00	0.114	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-235/236	0.0000	U	0.00597	0.00597	1.00	0.0365	pCi/g	08/21/21 14:07	09/02/21 15:02	1
Uranium-238	0.004885	U	0.0203	0.0203	1.00	0.0547	pCi/g	08/21/21 14:07	09/02/21 15:02	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*68.9*		*30 - 110*	*08/21/21 14:07*	*09/02/21 15:02*	*1*

Lab Sample ID: LCS 160-523551/2-A
Matrix: Solid
Analysis Batch: 525356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523551

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.277		0.705	1.00	0.0780	pCi/g	99	84 - 120		
Uranium-238			6.51	6.246		0.702	1.00	0.0634	pCi/g	96	82 - 122		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*74.9*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43084-1 DU
Matrix: Solid
Analysis Batch: 525360

Client Sample ID: FSS-017-081221
Prep Type: Total/NA
Prep Batch: 523551

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.129			0.1270		0.0790	1.00	0.0915	pCi/g			0.03	3
Uranium-235/236	0.00980	U		-0.00303 9	U	0.0273	1.00	0.0865	pCi/g			0.66	3
Uranium-238	0.128			0.1950		0.0895	1.00	0.0651	pCi/g			1.12	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*71.5*		*30 - 110*

Lab Sample ID: MB 160-523553/1-A
Matrix: Solid
Analysis Batch: 525304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523553

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01017	U	0.0236	0.0236	1.00	0.0503	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-235/236	-0.002532	U	0.00496	0.00497	1.00	0.0490	pCi/g	08/21/21 14:26	09/02/21 14:56	1
Uranium-238	0.01015	U	0.0295	0.0295	1.00	0.0639	pCi/g	08/21/21 14:26	09/02/21 14:56	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.9*		*30 - 110*	*08/21/21 14:26*	*09/02/21 14:56*	*1*

Lab Sample ID: LCS 160-523553/2-A
Matrix: Solid
Analysis Batch: 525305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523553

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	5.987		0.652	1.00	0.0650	pCi/g	94	84 - 120		
Uranium-238			6.51	6.080		0.660	1.00	0.0489	pCi/g	93	82 - 122		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*86.0*		*30 - 110*

Lab Sample ID: 160-43084-19 DU
Matrix: Solid
Analysis Batch: 525308

Client Sample ID: FSS-035-081321
Prep Type: Total/NA
Prep Batch: 523553

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.108			0.1119		0.0608	1.00	0.0540	pCi/g			0.10	3
Uranium-235/236	0.00693	U		0.01888	U	0.0262	1.00	0.0283	pCi/g			0.73	3
Uranium-238	0.122			0.1382		0.0660	1.00	0.0468	pCi/g			0.35	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43084-19 DU
Matrix: Solid
Analysis Batch: 525308

Client Sample ID: FSS-035-081321
Prep Type: Total/NA
Prep Batch: 523553

Tracer	DU %Yield	DU Qualifier	Limits
Uranium-232	88.8		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-523548/1-A
Matrix: Solid
Analysis Batch: 525464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523548

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.06077	U	0.0689	0.0691	1.00	0.112	pCi/g	08/21/21 12:59	09/03/21 14:01	1
Plutonium-239/240	-0.02910	U	0.0172	0.0174	1.00	0.0963	pCi/g	08/21/21 12:59	09/03/21 14:01	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-236 (T)	69.6		30 - 110	08/21/21 12:59	09/03/21 14:01	1

Lab Sample ID: LCS 160-523548/2-A
Matrix: Solid
Analysis Batch: 525465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523548

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.20	6.137		0.729	1.00	0.0919	pCi/g	118	80 - 125		
Plutonium-239/240			5.28	6.111		0.728	1.00	0.126	pCi/g	116	81 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-236 (T)	67.9		30 - 110

Lab Sample ID: 160-43084-1 DU
Matrix: Solid
Analysis Batch: 525467

Client Sample ID: FSS-017-081221
Prep Type: Total/NA
Prep Batch: 523548

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0234	U		0.003044	U	0.0373	1.00	0.0958	pCi/g			0.53	3
Plutonium-239/240	0.102			0.0000	U	0.0378	1.00	0.100	pCi/g			2.31	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-236 (T)	69.1		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: MB 160-523552/1-A
Matrix: Solid
Analysis Batch: 525287

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523552

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.04173	U	0.0459	0.0460	1.00	0.0696	pCi/g	08/21/21 14:10	09/02/21 22:06	1
Plutonium-239/240	-0.006961	U	0.00788	0.00790	1.00	0.0574	pCi/g	08/21/21 14:10	09/02/21 22:06	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*79.4*		*30 - 110*	*08/21/21 14:10*	*09/02/21 22:06*	*1*

Lab Sample ID: LCS 160-523552/2-A
Matrix: Solid
Analysis Batch: 525289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523552

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.20	6.210		0.730	1.00	0.0702	pCi/g	120	80 - 125		
Plutonium-239/240			5.28	6.049		0.716	1.00	0.0636	pCi/g	115	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-236 (T)	*62.4*		*30 - 110*

Lab Sample ID: 160-43084-19 DU
Matrix: Solid
Analysis Batch: 525291

Client Sample ID: FSS-035-081321
Prep Type: Total/NA
Prep Batch: 523552

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0338	U		0.03590	U	0.0449	1.00	0.0736	pCi/g			0.07	3
Plutonium-239/240	0.0159	U		0.008983	U	0.0176	1.00	0.0270	pCi/g			0.48	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-236 (T)	*80.5*		*30 - 110*

Lab Sample ID: MB 160-526441/1-A
Matrix: Solid
Analysis Batch: 527129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526441

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0000	U	0.0192	0.0192	1.00	0.0585	pCi/g	09/11/21 13:28	09/15/21 22:20	1
Plutonium-239/240	-0.002193	U	0.00430	0.00430	1.00	0.0425	pCi/g	09/11/21 13:28	09/15/21 22:20	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*81.8*		*30 - 110*	*09/11/21 13:28*	*09/15/21 22:20*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-526441/2-A
Matrix: Solid
Analysis Batch: 527128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526441

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.146		0.634	1.00	0.0544	pCi/g	99	80 - 125		
Plutonium-239/240			5.28	5.736		0.686	1.00	0.0545	pCi/g	109	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*62.7*		*30 - 110*

Lab Sample ID: 160-43084-27 DU
Matrix: Solid
Analysis Batch: 527125

Client Sample ID: FSS-043-081321
Prep Type: Total/NA
Prep Batch: 526441

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.00759	U		-0.00238	U	0.00469	1.00	0.0462	pCi/g			0.42	3
Plutonium-239/240	0.00760	U		0.0000	U	0.00469	1.00	0.0287	pCi/g			0.71	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*71.8*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-526244/1-A
Matrix: Solid
Analysis Batch: 526590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526244

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.149	U	1.06	1.06	5.00	1.76	pCi/g	09/10/21 08:46	09/13/21 02:23	1

Lab Sample ID: LCS 160-526244/2-A
Matrix: Solid
Analysis Batch: 526590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526244

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	84.35		9.61	5.00	1.95	pCi/g	100	75 - 125		

Lab Sample ID: 160-43084-1 MS
Matrix: Solid
Analysis Batch: 526590

Client Sample ID: FSS-017-081221
Prep Type: Total/NA
Prep Batch: 526244

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.855	U	80.3	75.61		8.63	5.00	1.77	pCi/g	93	29 - 128		

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43084-1 DU
Matrix: Solid
Analysis Batch: 526590

Client Sample ID: FSS-017-081221
Prep Type: Total/NA
Prep Batch: 526244

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.855	U		1.044	U	0.918	5.00	1.54	pCi/g			0.27	3

Lab Sample ID: MB 160-526978/1-A
Matrix: Solid
Analysis Batch: 527588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526978

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.6081	U	0.772	0.775	5.00	1.31	pCi/g	09/14/21 15:20	09/17/21 01:16	1

Lab Sample ID: LCS 160-526978/2-A
Matrix: Solid
Analysis Batch: 527588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526978

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	85.25		9.53	5.00	1.32	pCi/g	101	75 - 125		

Lab Sample ID: 160-43084-8 MS
Matrix: Solid
Analysis Batch: 527588

Client Sample ID: FSS-024-081221
Prep Type: Total/NA
Prep Batch: 526978

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.631	U	84.4	78.04		8.77	5.00	1.33	pCi/g	92	29 - 128		

Lab Sample ID: 160-43084-8 DU
Matrix: Solid
Analysis Batch: 527588

Client Sample ID: FSS-024-081221
Prep Type: Total/NA
Prep Batch: 526978

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.631	U		0.3153	U	0.698	5.00	1.22	pCi/g			0.61	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-523276/1-A
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523276

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.03762	U	0.176	0.176		0.219	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Americium-241	0.03227	U	0.0744	0.0745		0.130	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Bismuth-212	0.04052	U	0.640	0.640		1.18	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Bismuth-214	-0.01755	U	0.135	0.135		0.244	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Cesium-137	-0.02898	U	0.0488	0.0488		0.0843	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Cobalt-60	0.0000	U	0.00963	0.00963		0.0362	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Europium-152	0.08798	U	0.0545	0.0553		0.141	pCi/g	08/19/21 11:02	09/11/21 20:22	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-523276/1-A
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523276

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.01751	U	0.0599	0.0599		0.105	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Europium-155	0.01703	U	0.0584	0.0585		0.262	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Lead-212	-0.03957	U	0.0979	0.0980		0.169	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Lead-214	0.02415	U	0.0924	0.0924		0.132	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Potassium-40	-0.05990	U	0.697	0.697		1.01	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Radium-226	-0.01755	U	0.135	0.135	0.200	0.244	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Sodium-22	-0.007901	U	0.0335	0.0335		0.0654	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Thorium-232	0.03762	U	0.176	0.176		0.219	pCi/g	08/19/21 11:02	09/11/21 20:22	1
Zinc-65	0.0000	U	0.0572	0.0572		0.175	pCi/g	08/19/21 11:02	09/11/21 20:22	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/19/21 11:02*	*09/11/21 20:22*	*1*

Lab Sample ID: LCS 160-523276/2-A
Matrix: Solid
Analysis Batch: 526435

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523276

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	94.10		9.74		1.32	pCi/g	98	87 - 116
Cesium-137	26.3	25.06		2.63		0.220	pCi/g	95	87 - 120
Cobalt-60	8.58	8.355		0.875		0.0863	pCi/g	97	87 - 115

Lab Sample ID: 160-43084-20 DU
Matrix: Solid
Analysis Batch: 526583

Client Sample ID: FSS-036-081321
Prep Type: Total/NA
Prep Batch: 523276

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium-228	0.306		0.4166		0.119		0.173	pCi/g	0.93	2
Americium-241	0.0656	U	0.06013	U	0.104		0.177	pCi/g	0.06	2
Bismuth-212	-0.0201	U	0.3216	U	0.535		0.924	pCi/g	0.85	2
Bismuth-214	0.108	U	0.1290	U	0.0937		0.316	pCi/g	0.30	2
Cesium-137	-0.0283	U	0.0000	U	0.0295		0.0835	pCi/g	0.47	2
Cobalt-60	-0.00160	U	-0.01369	U	0.0905		0.0991	pCi/g	0.23	2
Europium-152	0.129	U	0.1263	U	0.0882		0.144	pCi/g	0.04	2
Europium-154	0.0616	U	-0.04787	U	0.0678		0.114	pCi/g	1.81	2
Europium-155	0.0179	U	-0.00053 29	U	0.137		0.531	pCi/g	0.25	2
Lead-212	0.339		0.2821		0.0905		0.114	pCi/g	0.80	2
Lead-214	0.0716	U	0.3002		0.0872		0.0674	pCi/g	2.92	2
Potassium-40	0.996	U	1.420		0.892		0.908	pCi/g	0.61	2
Radium-226	0.108	U	0.1290	U	0.0937	0.200	0.316	pCi/g	0.30	2
Sodium-22	0.000	U	-0.04274	U	0.0565		0.0952	pCi/g	1.46	2
Thorium-232	0.306		0.4166		0.119		0.173	pCi/g	0.93	2
Zinc-65	0.0412	U	-0.02265	U	0.0632		0.202	pCi/g	0.85	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tl-208	0.153			0.1455		0.0466		0.0372	pCi/g			0.21	2

Lab Sample ID: MB 160-523294/1-A
Matrix: Solid
Analysis Batch: 526435

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523294

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.0000	U	0.0311	0.0311		0.117	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Americium-241	0.03722	U	0.0676	0.0677		0.117	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Bismuth-212	-0.3273	U	0.654	0.654		1.15	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Bismuth-214	0.04868	U	0.0450	0.0453		0.239	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Cesium-137	-0.008110	U	0.0636	0.0636		0.116	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Cobalt-60	-0.002162	U	0.0798	0.0798		0.0937	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Europium-152	0.08043		0.0501	0.0507		0.0741	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Europium-154	-0.03177	U	0.0541	0.0542		0.0927	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Europium-155	0.02217	U	0.0657	0.0658		0.279	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Lead-212	0.005607	U	0.0663	0.0663		0.119	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Lead-214	0.01923	U	0.0500	0.0500		0.265	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Potassium-40	0.2954	U	0.450	0.451		0.758	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Radium-226	0.04868	U	0.0450	0.0453	0.200	0.239	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Sodium-22	0.0000	U	0.0173	0.0173		0.0459	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Thorium-232	0.0000	U	0.0311	0.0311		0.117	pCi/g	08/19/21 13:00	09/11/21 16:32	1
Zinc-65	-0.02862	U	0.0780	0.0780		0.203	pCi/g	08/19/21 13:00	09/11/21 16:32	1

Other Detected Radionuclides	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Other Detected Radionuclide	None						pCi/g	08/19/21 13:00	09/11/21 16:32	1

Lab Sample ID: LCS 160-523294/2-A
Matrix: Solid
Analysis Batch: 526434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523294

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	96.59		9.93		1.02	pCi/g	100	87 - 116		
Cesium-137			26.3	25.09		2.61		0.154	pCi/g	95	87 - 120		
Cobalt-60			8.58	7.980		0.825		0.0771	pCi/g	93	87 - 115		

Lab Sample ID: 160-43084-27 DU
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: FSS-043-081321
Prep Type: Total/NA
Prep Batch: 523294

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium-228	0.144			0.2036		0.100		0.113	pCi/g			0.84	2
Americium-241	-0.0518	U		0.002567	U	0.0830		0.113	pCi/g			0.76	2
Bismuth-212	0.209	U		0.2685	U	0.510		0.882	pCi/g			0.18	2
Bismuth-214	0.0507	U		0.1475		0.0752		0.0878	pCi/g			1.92	2
Cesium-137	0.0120	U		-0.03029	U	0.0467		0.0796	pCi/g			1.60	2
Cobalt-60	0.000	U		0.001125	U	0.0371		0.0466	pCi/g			0.06	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43084-27 DU
Matrix: Solid
Analysis Batch: 526431

Client Sample ID: FSS-043-081321
Prep Type: Total/NA
Prep Batch: 523294

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Europium-152	0.0415	U		0.001825	U	0.00280		0.127	pCi/g			1.52	2
Europium-154	0.0457	U		0.01822	U	0.104		0.0910	pCi/g			0.45	2
Europium-155	-0.0278	U		-0.00078 20	U	0.0973		0.276	pCi/g			0.28	2
Lead-212	0.175			0.1491		0.0560		0.0581	pCi/g			0.68	2
Lead-214	0.178			0.1343		0.0491		0.0869	pCi/g			1.10	2
Potassium-40	1.79			1.867		0.599		0.547	pCi/g			0.18	2
Radium-226	0.0507	U		0.1475		0.0752	0.200	0.0878	pCi/g			1.92	2
Sodium-22	0.0187	U		0.0000	U	0.00639		0.0240	pCi/g			2.24	2
Thorium-232	0.144			0.2036		0.100		0.113	pCi/g			0.84	2
Zinc-65	-0.0613	U		0.0000	U	0.0227		0.173	pCi/g			1.06	2

Other Detected Radionuclides	*Sample Result*	*Sample Qual*		*DU Result*	*DU Qual*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*			*DER*	*DER Limit*
Other Detected Radionuclide	*None*			*None*					*pCi/g*				

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-524237/1-A
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524237

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.5258	U	1.24	1.24	5.00	2.21	pCi/g	08/26/21 10:56	09/18/21 06:13	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*59.8*		*40 - 110*	*08/26/21 10:56*	*09/18/21 06:13*	*1*

Lab Sample ID: LCS 160-524237/2-A
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524237

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	19.63		2.59	5.00	1.67	pCi/g	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*78.7*		*40 - 110*

Lab Sample ID: 160-43079-A-7-E DU
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524237

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.150	U		-0.2638	U	0.922	5.00	1.67	pCi/g			0.64	3

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-43079-A-7-E DU
Matrix: Solid
Analysis Batch: 527633

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524237

Carrier	DU %Yield	DU Qualifier	Limits
Ni	80.1		40 - 110

Lab Sample ID: MB 160-524260/1-A
Matrix: Solid
Analysis Batch: 526586

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524260

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.078	U	0.944	0.951	5.00	1.62	pCi/g	08/26/21 14:26	09/11/21 22:48	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	86.4		40 - 110	08/26/21 14:26	09/11/21 22:48	1

Lab Sample ID: LCS 160-524260/2-A
Matrix: Solid
Analysis Batch: 526586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524260

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	19.87		2.50	5.00	1.39	pCi/g	92	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni	96.8		40 - 110

Lab Sample ID: 160-43084-9 DU
Matrix: Solid
Analysis Batch: 526586

Client Sample ID: FSS-025-081221
Prep Type: Total/NA
Prep Batch: 524260

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.14	U		0.3762	U	0.689	5.00	1.21	pCi/g			1.35	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni	105		40 - 110

Lab Sample ID: MB 160-526025/1-A
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526025

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.180	U	0.883	0.891	5.00	1.48	pCi/g	09/08/21 16:09	09/17/21 01:59	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	115	Q	40 - 110	09/08/21 16:09	09/17/21 01:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-526025/2-A
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526025

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			19.1	18.81		2.41	5.00	1.45	pCi/g	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*103*		*40 - 110*

Lab Sample ID: 160-43113-D-13-J DU
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526025

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.15	U		0.7118	U	0.815	5.00	1.36	pCi/g			0.72	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*102*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-524258/1-A
Matrix: Solid
Analysis Batch: 526266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524258

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.3883	U	1.60	1.60	5.00	2.80	pCi/g	08/26/21 13:52	09/09/21 08:41	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-236 (T)	*69.6*		*30 - 110*	*08/26/21 13:52*	*09/09/21 08:41*	*1*

Lab Sample ID: LCS 160-524258/2-A
Matrix: Solid
Analysis Batch: 526266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524258

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	24.21		3.49	5.00	3.03	pCi/g	122	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-236 (T)	*67.9*		*30 - 110*

Lab Sample ID: 160-43084-1 DU
Matrix: Solid
Analysis Batch: 526266

Client Sample ID: FSS-017-081221
Prep Type: Total/NA
Prep Batch: 524258

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	0.126	U		-0.3393	U	1.53	5.00	2.75	pCi/g			0.43	3

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Tracer	DU %Yield	DU Qualifier	Limits
Pu-236 (T)	69.1		30 - 110

Lab Sample ID: MB 160-524346/1-A
Matrix: Solid
Analysis Batch: 526589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524346

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.7489	U	1.29	1.29	5.00	2.34	pCi/g	08/21/21 14:26	09/11/21 11:32	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-236 (T)	79.4		30 - 110	08/21/21 14:26	09/11/21 11:32	1

Lab Sample ID: LCS 160-524346/2-A
Matrix: Solid
Analysis Batch: 526589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524346

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	20.36		3.05	5.00	2.82	pCi/g	102	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-236 (T)	62.4		30 - 110

Lab Sample ID: 160-43084-19 DU
Matrix: Solid
Analysis Batch: 526589

Client Sample ID: FSS-035-081321
Prep Type: Total/NA
Prep Batch: 524346

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.971	U		-1.349	U	1.23	5.00	2.29	pCi/g			0.45	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-236 (T)	80.5		30 - 110

Lab Sample ID: MB 160-526529/1-A
Matrix: Solid
Analysis Batch: 528692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526529

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.1322	U	1.06	1.06	5.00	1.88	pCi/g	09/12/21 17:27	09/23/21 16:17	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	81.8		30 - 110	09/12/21 17:27	09/23/21 16:17	1

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: LCS 160-526529/2-A
Matrix: Solid
Analysis Batch: 528692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526529

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	18.79		2.76	5.00	2.51	pCi/g	95	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*62.7*		*30 - 110*

Lab Sample ID: 160-43084-27 DU
Matrix: Solid
Analysis Batch: 528692

Client Sample ID: FSS-043-081321
Prep Type: Total/NA
Prep Batch: 526529

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.07	U		-0.2224	U	1.29	5.00	2.37	pCi/g			1.33	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*71.8*		*30 - 110*

Metals

Prep Batch: 548182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	3050B	
160-43084-2	FSS-018-081221	Total/NA	Solid	3050B	
160-43084-3	FSS-019-081221	Total/NA	Solid	3050B	
160-43084-4	FSS-020-081221	Total/NA	Solid	3050B	
MB 280-548182/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548182/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 280-548182/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
160-43079-C-1-I MS	Matrix Spike	Total/NA	Solid	3050B	
160-43079-C-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Prep Batch: 548183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-25	FSS-041-081321	Total/NA	Solid	3050B	
160-43084-26	FSS-042-081321	Total/NA	Solid	3050B	
160-43084-27	FSS-043-081321	Total/NA	Solid	3050B	
MB 280-548183/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548183/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43084-25 MS	FSS-041-081321	Total/NA	Solid	3050B	
160-43084-25 MSD	FSS-041-081321	Total/NA	Solid	3050B	

Prep Batch: 548184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-5	FSS-021-081221	Total/NA	Solid	3050B	
160-43084-6	FSS-022-081221	Total/NA	Solid	3050B	
160-43084-7	FSS-023-081221	Total/NA	Solid	3050B	
160-43084-8	FSS-024-081221	Total/NA	Solid	3050B	
160-43084-9	FSS-025-081221	Total/NA	Solid	3050B	
160-43084-10	FSS-026-081221	Total/NA	Solid	3050B	
160-43084-11	FSS-027-081221	Total/NA	Solid	3050B	
160-43084-12	FSS-028-081221	Total/NA	Solid	3050B	
160-43084-13	FSS-029-081321	Total/NA	Solid	3050B	
160-43084-14	FSS-030-081321	Total/NA	Solid	3050B	
160-43084-15	FSS-031-081321	Total/NA	Solid	3050B	
160-43084-16	FSS-032-081321	Total/NA	Solid	3050B	
160-43084-17	FSS-033-081321	Total/NA	Solid	3050B	
160-43084-18	FSS-034-081321	Total/NA	Solid	3050B	
160-43084-19	FSS-035-081321	Total/NA	Solid	3050B	
160-43084-20	FSS-036-081321	Total/NA	Solid	3050B	
160-43084-21	FSS-037-081321	Total/NA	Solid	3050B	
160-43084-22	FSS-038-081321	Total/NA	Solid	3050B	
160-43084-23	FSS-039-081321	Total/NA	Solid	3050B	
160-43084-24	FSS-040-081321	Total/NA	Solid	3050B	
MB 280-548184/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548184/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43084-5 MS	FSS-021-081221	Total/NA	Solid	3050B	
160-43084-5 MSD	FSS-021-081221	Total/NA	Solid	3050B	

Prep Batch: 548521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	7471B	
160-43084-2	FSS-018-081221	Total/NA	Solid	7471B	

Metals (Continued)

Prep Batch: 548521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-3	FSS-019-081221	Total/NA	Solid	7471B	
160-43084-4	FSS-020-081221	Total/NA	Solid	7471B	
160-43084-5	FSS-021-081221	Total/NA	Solid	7471B	
160-43084-6	FSS-022-081221	Total/NA	Solid	7471B	
160-43084-7	FSS-023-081221	Total/NA	Solid	7471B	
160-43084-8	FSS-024-081221	Total/NA	Solid	7471B	
160-43084-9	FSS-025-081221	Total/NA	Solid	7471B	
160-43084-10	FSS-026-081221	Total/NA	Solid	7471B	
160-43084-11	FSS-027-081221	Total/NA	Solid	7471B	
160-43084-12	FSS-028-081221	Total/NA	Solid	7471B	
160-43084-13	FSS-029-081321	Total/NA	Solid	7471B	
160-43084-14	FSS-030-081321	Total/NA	Solid	7471B	
160-43084-15	FSS-031-081321	Total/NA	Solid	7471B	
160-43084-16	FSS-032-081321	Total/NA	Solid	7471B	
160-43084-17	FSS-033-081321	Total/NA	Solid	7471B	
160-43084-18	FSS-034-081321	Total/NA	Solid	7471B	
160-43084-19	FSS-035-081321	Total/NA	Solid	7471B	
MB 280-548521/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-548521/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-548521/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43084-1 MS	FSS-017-081221	Total/NA	Solid	7471B	
160-43084-1 MSD	FSS-017-081221	Total/NA	Solid	7471B	

Prep Batch: 548691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-20	FSS-036-081321	Total/NA	Solid	7471B	
160-43084-21	FSS-037-081321	Total/NA	Solid	7471B	
160-43084-22	FSS-038-081321	Total/NA	Solid	7471B	
160-43084-23	FSS-039-081321	Total/NA	Solid	7471B	
160-43084-24	FSS-040-081321	Total/NA	Solid	7471B	
160-43084-25	FSS-041-081321	Total/NA	Solid	7471B	
160-43084-26	FSS-042-081321	Total/NA	Solid	7471B	
160-43084-27	FSS-043-081321	Total/NA	Solid	7471B	
MB 280-548691/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-548691/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-548691/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
280-152257-A-1-D MS	Matrix Spike	Total/NA	Solid	7471B	
280-152257-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 548709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-25	FSS-041-081321	Total/NA	Solid	6020B	548183
160-43084-26	FSS-042-081321	Total/NA	Solid	6020B	548183
160-43084-27	FSS-043-081321	Total/NA	Solid	6020B	548183
MB 280-548183/1-A	Method Blank	Total/NA	Solid	6020B	548183
LCS 280-548183/2-A	Lab Control Sample	Total/NA	Solid	6020B	548183
160-43084-25 MS	FSS-041-081321	Total/NA	Solid	6020B	548183
160-43084-25 MSD	FSS-041-081321	Total/NA	Solid	6020B	548183

QC Association Summary

Client: FPM Remediations Inc
Job ID: 160-43084-1
Project/Site: BNL Decommissioning Project

Metals

Analysis Batch: 548867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	7471B	548521
160-43084-2	FSS-018-081221	Total/NA	Solid	7471B	548521
160-43084-3	FSS-019-081221	Total/NA	Solid	7471B	548521
160-43084-4	FSS-020-081221	Total/NA	Solid	7471B	548521
160-43084-5	FSS-021-081221	Total/NA	Solid	7471B	548521
160-43084-6	FSS-022-081221	Total/NA	Solid	7471B	548521
160-43084-7	FSS-023-081221	Total/NA	Solid	7471B	548521
160-43084-8	FSS-024-081221	Total/NA	Solid	7471B	548521
160-43084-9	FSS-025-081221	Total/NA	Solid	7471B	548521
160-43084-10	FSS-026-081221	Total/NA	Solid	7471B	548521
160-43084-11	FSS-027-081221	Total/NA	Solid	7471B	548521
160-43084-12	FSS-028-081221	Total/NA	Solid	7471B	548521
160-43084-13	FSS-029-081321	Total/NA	Solid	7471B	548521
160-43084-14	FSS-030-081321	Total/NA	Solid	7471B	548521
160-43084-15	FSS-031-081321	Total/NA	Solid	7471B	548521
160-43084-16	FSS-032-081321	Total/NA	Solid	7471B	548521
160-43084-17	FSS-033-081321	Total/NA	Solid	7471B	548521
160-43084-18	FSS-034-081321	Total/NA	Solid	7471B	548521
160-43084-19	FSS-035-081321	Total/NA	Solid	7471B	548521
160-43084-20	FSS-036-081321	Total/NA	Solid	7471B	548691
160-43084-21	FSS-037-081321	Total/NA	Solid	7471B	548691
160-43084-22	FSS-038-081321	Total/NA	Solid	7471B	548691
160-43084-23	FSS-039-081321	Total/NA	Solid	7471B	548691
160-43084-24	FSS-040-081321	Total/NA	Solid	7471B	548691
160-43084-25	FSS-041-081321	Total/NA	Solid	7471B	548691
160-43084-26	FSS-042-081321	Total/NA	Solid	7471B	548691
160-43084-27	FSS-043-081321	Total/NA	Solid	7471B	548691
MB 280-548521/1-A	Method Blank	Total/NA	Solid	7471B	548521
MB 280-548691/1-A	Method Blank	Total/NA	Solid	7471B	548691
LCS 280-548521/2-A	Lab Control Sample	Total/NA	Solid	7471B	548521
LCS 280-548691/2-A	Lab Control Sample	Total/NA	Solid	7471B	548691
LCSD 280-548521/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	548521
LCSD 280-548691/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	548691
160-43084-1 MS	FSS-017-081221	Total/NA	Solid	7471B	548521
160-43084-1 MSD	FSS-017-081221	Total/NA	Solid	7471B	548521
280-152257-A-1-D MS	Matrix Spike	Total/NA	Solid	7471B	548691
280-152257-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	548691

Analysis Batch: 549084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	6020B	548182
160-43084-2	FSS-018-081221	Total/NA	Solid	6020B	548182
160-43084-3	FSS-019-081221	Total/NA	Solid	6020B	548182
160-43084-4	FSS-020-081221	Total/NA	Solid	6020B	548182
160-43084-5	FSS-021-081221	Total/NA	Solid	6020B	548184
160-43084-6	FSS-022-081221	Total/NA	Solid	6020B	548184
160-43084-7	FSS-023-081221	Total/NA	Solid	6020B	548184
160-43084-8	FSS-024-081221	Total/NA	Solid	6020B	548184
160-43084-9	FSS-025-081221	Total/NA	Solid	6020B	548184
160-43084-10	FSS-026-081221	Total/NA	Solid	6020B	548184
160-43084-11	FSS-027-081221	Total/NA	Solid	6020B	548184

Metals (Continued)

Analysis Batch: 549084 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-12	FSS-028-081221	Total/NA	Solid	6020B	548184
160-43084-13	FSS-029-081321	Total/NA	Solid	6020B	548184
160-43084-14	FSS-030-081321	Total/NA	Solid	6020B	548184
160-43084-15	FSS-031-081321	Total/NA	Solid	6020B	548184
160-43084-16	FSS-032-081321	Total/NA	Solid	6020B	548184
160-43084-17	FSS-033-081321	Total/NA	Solid	6020B	548184
160-43084-18	FSS-034-081321	Total/NA	Solid	6020B	548184
160-43084-19	FSS-035-081321	Total/NA	Solid	6020B	548184
160-43084-20	FSS-036-081321	Total/NA	Solid	6020B	548184
160-43084-21	FSS-037-081321	Total/NA	Solid	6020B	548184
160-43084-22	FSS-038-081321	Total/NA	Solid	6020B	548184
160-43084-23	FSS-039-081321	Total/NA	Solid	6020B	548184
160-43084-24	FSS-040-081321	Total/NA	Solid	6020B	548184
MB 280-548182/1-A	Method Blank	Total/NA	Solid	6020B	548182
MB 280-548184/1-A	Method Blank	Total/NA	Solid	6020B	548184
LCS 280-548182/2-A	Lab Control Sample	Total/NA	Solid	6020B	548182
LCSD 280-548182/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	548182
160-43079-C-1-I MS	Matrix Spike	Total/NA	Solid	6020B	548182
160-43079-C-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	6020B	548182
160-43084-5 MS	FSS-021-081221	Total/NA	Solid	6020B	548184
160-43084-5 MSD	FSS-021-081221	Total/NA	Solid	6020B	548184

Analysis Batch: 549199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-548184/2-A	Lab Control Sample	Total/NA	Solid	6020B	548184

General Chemistry

Analysis Batch: 547683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	Moisture	
160-43084-2	FSS-018-081221	Total/NA	Solid	Moisture	
160-43084-3	FSS-019-081221	Total/NA	Solid	Moisture	
160-43084-4	FSS-020-081221	Total/NA	Solid	Moisture	
160-43084-5	FSS-021-081221	Total/NA	Solid	Moisture	
160-43084-6	FSS-022-081221	Total/NA	Solid	Moisture	
160-43084-7	FSS-023-081221	Total/NA	Solid	Moisture	
160-43084-8	FSS-024-081221	Total/NA	Solid	Moisture	
160-43084-9	FSS-025-081221	Total/NA	Solid	Moisture	
160-43084-10	FSS-026-081221	Total/NA	Solid	Moisture	
160-43084-11	FSS-027-081221	Total/NA	Solid	Moisture	
160-43079-C-8 DU	Duplicate	Total/NA	Solid	Moisture	
280-152195-D-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 547737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-12	FSS-028-081221	Total/NA	Solid	Moisture	
160-43084-13	FSS-029-081321	Total/NA	Solid	Moisture	
160-43084-14	FSS-030-081321	Total/NA	Solid	Moisture	
160-43084-15	FSS-031-081321	Total/NA	Solid	Moisture	
160-43084-16	FSS-032-081321	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 547737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-17	FSS-033-081321	Total/NA	Solid	Moisture	
160-43084-18	FSS-034-081321	Total/NA	Solid	Moisture	
160-43084-19	FSS-035-081321	Total/NA	Solid	Moisture	
160-43084-20	FSS-036-081321	Total/NA	Solid	Moisture	
160-43084-21	FSS-037-081321	Total/NA	Solid	Moisture	
160-43084-22	FSS-038-081321	Total/NA	Solid	Moisture	
160-43084-23	FSS-039-081321	Total/NA	Solid	Moisture	
160-43084-24	FSS-040-081321	Total/NA	Solid	Moisture	
160-43084-25	FSS-041-081321	Total/NA	Solid	Moisture	
160-43084-26	FSS-042-081321	Total/NA	Solid	Moisture	
160-43084-27	FSS-043-081321	Total/NA	Solid	Moisture	
160-43084-12 DU	FSS-028-081221	Total/NA	Solid	Moisture	

Rad

Leach Batch: 522818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-A-2-F DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43079-A-7-E DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 522952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	Dry and Grind	
160-43084-2	FSS-018-081221	Total/NA	Solid	Dry and Grind	
160-43084-3	FSS-019-081221	Total/NA	Solid	Dry and Grind	
160-43084-4	FSS-020-081221	Total/NA	Solid	Dry and Grind	
160-43084-5	FSS-021-081221	Total/NA	Solid	Dry and Grind	
160-43084-6	FSS-022-081221	Total/NA	Solid	Dry and Grind	
160-43084-7	FSS-023-081221	Total/NA	Solid	Dry and Grind	
160-43084-8	FSS-024-081221	Total/NA	Solid	Dry and Grind	
160-43084-9	FSS-025-081221	Total/NA	Solid	Dry and Grind	
160-43084-10	FSS-026-081221	Total/NA	Solid	Dry and Grind	
160-43084-11	FSS-027-081221	Total/NA	Solid	Dry and Grind	
160-43084-12	FSS-028-081221	Total/NA	Solid	Dry and Grind	
160-43084-13	FSS-029-081321	Total/NA	Solid	Dry and Grind	
160-43084-14	FSS-030-081321	Total/NA	Solid	Dry and Grind	
160-43084-15	FSS-031-081321	Total/NA	Solid	Dry and Grind	
160-43084-16	FSS-032-081321	Total/NA	Solid	Dry and Grind	
160-43084-17	FSS-033-081321	Total/NA	Solid	Dry and Grind	
160-43084-18	FSS-034-081321	Total/NA	Solid	Dry and Grind	
160-43084-19	FSS-035-081321	Total/NA	Solid	Dry and Grind	
160-43084-20	FSS-036-081321	Total/NA	Solid	Dry and Grind	
160-43084-21	FSS-037-081321	Total/NA	Solid	Dry and Grind	
160-43084-22	FSS-038-081321	Total/NA	Solid	Dry and Grind	
160-43084-23	FSS-039-081321	Total/NA	Solid	Dry and Grind	
160-43084-24	FSS-040-081321	Total/NA	Solid	Dry and Grind	
160-43084-25	FSS-041-081321	Total/NA	Solid	Dry and Grind	
160-43084-26	FSS-042-081321	Total/NA	Solid	Dry and Grind	
160-43084-27	FSS-043-081321	Total/NA	Solid	Dry and Grind	
160-43084-1 DU	FSS-017-081221	Total/NA	Solid	Dry and Grind	
160-43084-6 DU	FSS-022-081221	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 522952 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-9 DU	FSS-025-081221	Total/NA	Solid	Dry and Grind	
160-43084-19 DU	FSS-035-081321	Total/NA	Solid	Dry and Grind	
160-43084-20 DU	FSS-036-081321	Total/NA	Solid	Dry and Grind	
160-43084-26 DU	FSS-042-081321	Total/NA	Solid	Dry and Grind	
160-43084-27 DU	FSS-043-081321	Total/NA	Solid	Dry and Grind	

Prep Batch: 523276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-2	FSS-018-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-3	FSS-019-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-4	FSS-020-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-5	FSS-021-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-6	FSS-022-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-7	FSS-023-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-8	FSS-024-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-9	FSS-025-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-10	FSS-026-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-11	FSS-027-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-12	FSS-028-081221	Total/NA	Solid	Fill_Geo-21	522952
160-43084-13	FSS-029-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-14	FSS-030-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-15	FSS-031-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-16	FSS-032-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-17	FSS-033-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-18	FSS-034-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-19	FSS-035-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-20	FSS-036-081321	Total/NA	Solid	Fill_Geo-21	522952
MB 160-523276/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-523276/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43084-20 DU	FSS-036-081321	Total/NA	Solid	Fill_Geo-21	522952

Prep Batch: 523294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-21	FSS-037-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-22	FSS-038-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-23	FSS-039-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-24	FSS-040-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-25	FSS-041-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-26	FSS-042-081321	Total/NA	Solid	Fill_Geo-21	522952
160-43084-27	FSS-043-081321	Total/NA	Solid	Fill_Geo-21	522952
MB 160-523294/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-523294/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43084-27 DU	FSS-043-081321	Total/NA	Solid	Fill_Geo-21	522952

Leach Batch: 523370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-D-13-J DU	Duplicate	Total/NA	Solid	Dry and Grind	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Rad

Prep Batch: 523548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	ExtChrom	522952
160-43084-2	FSS-018-081221	Total/NA	Solid	ExtChrom	522952
160-43084-3	FSS-019-081221	Total/NA	Solid	ExtChrom	522952
160-43084-4	FSS-020-081221	Total/NA	Solid	ExtChrom	522952
160-43084-5	FSS-021-081221	Total/NA	Solid	ExtChrom	522952
160-43084-6	FSS-022-081221	Total/NA	Solid	ExtChrom	522952
160-43084-7	FSS-023-081221	Total/NA	Solid	ExtChrom	522952
160-43084-8	FSS-024-081221	Total/NA	Solid	ExtChrom	522952
160-43084-9	FSS-025-081221	Total/NA	Solid	ExtChrom	522952
160-43084-10	FSS-026-081221	Total/NA	Solid	ExtChrom	522952
160-43084-11	FSS-027-081221	Total/NA	Solid	ExtChrom	522952
160-43084-12	FSS-028-081221	Total/NA	Solid	ExtChrom	522952
160-43084-13	FSS-029-081321	Total/NA	Solid	ExtChrom	522952
160-43084-14	FSS-030-081321	Total/NA	Solid	ExtChrom	522952
160-43084-15	FSS-031-081321	Total/NA	Solid	ExtChrom	522952
160-43084-16	FSS-032-081321	Total/NA	Solid	ExtChrom	522952
160-43084-17	FSS-033-081321	Total/NA	Solid	ExtChrom	522952
160-43084-18	FSS-034-081321	Total/NA	Solid	ExtChrom	522952
MB 160-523548/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-523548/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43084-1 DU	FSS-017-081221	Total/NA	Solid	ExtChrom	522952

Prep Batch: 523551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	ExtChrom	522952
160-43084-2	FSS-018-081221	Total/NA	Solid	ExtChrom	522952
160-43084-3	FSS-019-081221	Total/NA	Solid	ExtChrom	522952
160-43084-4	FSS-020-081221	Total/NA	Solid	ExtChrom	522952
160-43084-5	FSS-021-081221	Total/NA	Solid	ExtChrom	522952
160-43084-6	FSS-022-081221	Total/NA	Solid	ExtChrom	522952
160-43084-7	FSS-023-081221	Total/NA	Solid	ExtChrom	522952
160-43084-8	FSS-024-081221	Total/NA	Solid	ExtChrom	522952
160-43084-9	FSS-025-081221	Total/NA	Solid	ExtChrom	522952
160-43084-10	FSS-026-081221	Total/NA	Solid	ExtChrom	522952
160-43084-11	FSS-027-081221	Total/NA	Solid	ExtChrom	522952
160-43084-12	FSS-028-081221	Total/NA	Solid	ExtChrom	522952
160-43084-13	FSS-029-081321	Total/NA	Solid	ExtChrom	522952
160-43084-14	FSS-030-081321	Total/NA	Solid	ExtChrom	522952
160-43084-15	FSS-031-081321	Total/NA	Solid	ExtChrom	522952
160-43084-16	FSS-032-081321	Total/NA	Solid	ExtChrom	522952
160-43084-17	FSS-033-081321	Total/NA	Solid	ExtChrom	522952
160-43084-18	FSS-034-081321	Total/NA	Solid	ExtChrom	522952
MB 160-523551/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-523551/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43084-1 DU	FSS-017-081221	Total/NA	Solid	ExtChrom	522952

Prep Batch: 523552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-19	FSS-035-081321	Total/NA	Solid	ExtChrom	522952
160-43084-20	FSS-036-081321	Total/NA	Solid	ExtChrom	522952
160-43084-21	FSS-037-081321	Total/NA	Solid	ExtChrom	522952

Rad (Continued)

Prep Batch: 523552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-22	FSS-038-081321	Total/NA	Solid	ExtChrom	522952
160-43084-23	FSS-039-081321	Total/NA	Solid	ExtChrom	522952
160-43084-24	FSS-040-081321	Total/NA	Solid	ExtChrom	522952
160-43084-25	FSS-041-081321	Total/NA	Solid	ExtChrom	522952
160-43084-26	FSS-042-081321	Total/NA	Solid	ExtChrom	522952
MB 160-523552/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-523552/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43084-19 DU	FSS-035-081321	Total/NA	Solid	ExtChrom	522952

Prep Batch: 523553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-19	FSS-035-081321	Total/NA	Solid	ExtChrom	522952
160-43084-20	FSS-036-081321	Total/NA	Solid	ExtChrom	522952
160-43084-21	FSS-037-081321	Total/NA	Solid	ExtChrom	522952
160-43084-22	FSS-038-081321	Total/NA	Solid	ExtChrom	522952
160-43084-23	FSS-039-081321	Total/NA	Solid	ExtChrom	522952
160-43084-24	FSS-040-081321	Total/NA	Solid	ExtChrom	522952
160-43084-25	FSS-041-081321	Total/NA	Solid	ExtChrom	522952
160-43084-26	FSS-042-081321	Total/NA	Solid	ExtChrom	522952
160-43084-27	FSS-043-081321	Total/NA	Solid	ExtChrom	522952
MB 160-523553/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-523553/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43084-19 DU	FSS-035-081321	Total/NA	Solid	ExtChrom	522952

Prep Batch: 524237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-2	FSS-018-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-3	FSS-019-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-4	FSS-020-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-5	FSS-021-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
MB 160-524237/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-524237/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43079-A-7-E DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	522818

Prep Batch: 524258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	Leach_Precip	
160-43084-2	FSS-018-081221	Total/NA	Solid	Leach_Precip	
160-43084-3	FSS-019-081221	Total/NA	Solid	Leach_Precip	
160-43084-4	FSS-020-081221	Total/NA	Solid	Leach_Precip	
160-43084-5	FSS-021-081221	Total/NA	Solid	Leach_Precip	
160-43084-6	FSS-022-081221	Total/NA	Solid	Leach_Precip	
160-43084-7	FSS-023-081221	Total/NA	Solid	Leach_Precip	
160-43084-8	FSS-024-081221	Total/NA	Solid	Leach_Precip	
160-43084-9	FSS-025-081221	Total/NA	Solid	Leach_Precip	
160-43084-10	FSS-026-081221	Total/NA	Solid	Leach_Precip	
160-43084-11	FSS-027-081221	Total/NA	Solid	Leach_Precip	
160-43084-12	FSS-028-081221	Total/NA	Solid	Leach_Precip	
160-43084-13	FSS-029-081321	Total/NA	Solid	Leach_Precip	
160-43084-14	FSS-030-081321	Total/NA	Solid	Leach_Precip	

Rad (Continued)

Prep Batch: 524258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-15	FSS-031-081321	Total/NA	Solid	Leach_Precip	
160-43084-16	FSS-032-081321	Total/NA	Solid	Leach_Precip	
160-43084-17	FSS-033-081321	Total/NA	Solid	Leach_Precip	
160-43084-18	FSS-034-081321	Total/NA	Solid	Leach_Precip	
MB 160-524258/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-524258/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43084-1 DU	FSS-017-081221	Total/NA	Solid	Leach_Precip	

Prep Batch: 524260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-6	FSS-022-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-7	FSS-023-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-8	FSS-024-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-9	FSS-025-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-10	FSS-026-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-11	FSS-027-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-12	FSS-028-081221	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-13	FSS-029-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-14	FSS-030-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-15	FSS-031-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-16	FSS-032-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-17	FSS-033-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-18	FSS-034-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-19	FSS-035-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-20	FSS-036-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-21	FSS-037-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-22	FSS-038-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-23	FSS-039-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-24	FSS-040-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-25	FSS-041-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
MB 160-524260/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-524260/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43084-9 DU	FSS-025-081221	Total/NA	Solid	Ext_Chrom_LSC	522952

Prep Batch: 524346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-19	FSS-035-081321	Total/NA	Solid	Leach_Precip	
160-43084-20	FSS-036-081321	Total/NA	Solid	Leach_Precip	
160-43084-21	FSS-037-081321	Total/NA	Solid	Leach_Precip	
160-43084-22	FSS-038-081321	Total/NA	Solid	Leach_Precip	
160-43084-23	FSS-039-081321	Total/NA	Solid	Leach_Precip	
160-43084-24	FSS-040-081321	Total/NA	Solid	Leach_Precip	
160-43084-25	FSS-041-081321	Total/NA	Solid	Leach_Precip	
160-43084-26	FSS-042-081321	Total/NA	Solid	Leach_Precip	
MB 160-524346/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-524346/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43084-19 DU	FSS-035-081321	Total/NA	Solid	Leach_Precip	

Prep Batch: 524352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	DPS-7	522952

Rad (Continued)

Prep Batch: 524352 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-2	FSS-018-081221	Total/NA	Solid	DPS-7	522952
160-43084-3	FSS-019-081221	Total/NA	Solid	DPS-7	522952
160-43084-4	FSS-020-081221	Total/NA	Solid	DPS-7	522952
160-43084-5	FSS-021-081221	Total/NA	Solid	DPS-7	522952
MB 160-524352/23-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-524352/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43079-A-2-F DU	Duplicate	Total/NA	Solid	DPS-7	522818

Prep Batch: 524988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-2	FSS-018-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-3	FSS-019-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-4	FSS-020-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-5	FSS-021-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-6	FSS-022-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-7	FSS-023-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-8	FSS-024-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-9	FSS-025-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-10	FSS-026-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-11	FSS-027-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-12	FSS-028-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-13	FSS-029-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-14	FSS-030-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-15	FSS-031-081321	Total/NA	Solid	LSC_Dist_Susp	
MB 160-524988/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-524988/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43084-14 MS	FSS-030-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-15 DU	FSS-031-081321	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 524989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-16	FSS-032-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-17	FSS-033-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-18	FSS-034-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-19	FSS-035-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-20	FSS-036-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-21	FSS-037-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-22	FSS-038-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-23	FSS-039-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-24	FSS-040-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-25	FSS-041-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-26	FSS-042-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-27	FSS-043-081321	Total/NA	Solid	LSC_Dist_Susp	
MB 160-524989/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-524989/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43084-26 MS	FSS-042-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-27 DU	FSS-043-081321	Total/NA	Solid	LSC_Dist_Susp	

Rad

Prep Batch: 525600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-6	FSS-022-081221	Total/NA	Solid	DPS-7	522952
160-43084-7	FSS-023-081221	Total/NA	Solid	DPS-7	522952
160-43084-8	FSS-024-081221	Total/NA	Solid	DPS-7	522952
160-43084-9	FSS-025-081221	Total/NA	Solid	DPS-7	522952
160-43084-10	FSS-026-081221	Total/NA	Solid	DPS-7	522952
160-43084-11	FSS-027-081221	Total/NA	Solid	DPS-7	522952
160-43084-12	FSS-028-081221	Total/NA	Solid	DPS-7	522952
160-43084-13	FSS-029-081321	Total/NA	Solid	DPS-7	522952
160-43084-14	FSS-030-081321	Total/NA	Solid	DPS-7	522952
160-43084-15	FSS-031-081321	Total/NA	Solid	DPS-7	522952
160-43084-16	FSS-032-081321	Total/NA	Solid	DPS-7	522952
160-43084-17	FSS-033-081321	Total/NA	Solid	DPS-7	522952
160-43084-18	FSS-034-081321	Total/NA	Solid	DPS-7	522952
160-43084-19	FSS-035-081321	Total/NA	Solid	DPS-7	522952
160-43084-20	FSS-036-081321	Total/NA	Solid	DPS-7	522952
160-43084-21	FSS-037-081321	Total/NA	Solid	DPS-7	522952
160-43084-22	FSS-038-081321	Total/NA	Solid	DPS-7	522952
160-43084-23	FSS-039-081321	Total/NA	Solid	DPS-7	522952
160-43084-24	FSS-040-081321	Total/NA	Solid	DPS-7	522952
160-43084-25	FSS-041-081321	Total/NA	Solid	DPS-7	522952
MB 160-525600/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-525600/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43084-6 DU	FSS-022-081221	Total/NA	Solid	DPS-7	522952

Prep Batch: 525601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-26	FSS-042-081321	Total/NA	Solid	DPS-7	522952
160-43084-27	FSS-043-081321	Total/NA	Solid	DPS-7	522952
MB 160-525601/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-525601/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43084-26 DU	FSS-042-081321	Total/NA	Solid	DPS-7	522952

Prep Batch: 526025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-26	FSS-042-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
160-43084-27	FSS-043-081321	Total/NA	Solid	Ext_Chrom_LSC	522952
MB 160-526025/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-526025/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43113-D-13-J DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	523370

Prep Batch: 526244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1	FSS-017-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-2	FSS-018-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-3	FSS-019-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-4	FSS-020-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-5	FSS-021-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-6	FSS-022-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-7	FSS-023-081221	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526244/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526244/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 526244 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-1 MS	FSS-017-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-1 DU	FSS-017-081221	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 526441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-27	FSS-043-081321	Total/NA	Solid	ExtChrom	522952
MB 160-526441/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526441/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43084-27 DU	FSS-043-081321	Total/NA	Solid	ExtChrom	522952

Prep Batch: 526529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-27	FSS-043-081321	Total/NA	Solid	Leach_Precip	
MB 160-526529/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526529/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43084-27 DU	FSS-043-081321	Total/NA	Solid	Leach_Precip	

Prep Batch: 526978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-8	FSS-024-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-9	FSS-025-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-10	FSS-026-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-11	FSS-027-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-12	FSS-028-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-13	FSS-029-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-14	FSS-030-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-15	FSS-031-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-16	FSS-032-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-17	FSS-033-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-18	FSS-034-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-19	FSS-035-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-20	FSS-036-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-21	FSS-037-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-22	FSS-038-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-23	FSS-039-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-24	FSS-040-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-25	FSS-041-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-26	FSS-042-081321	Total/NA	Solid	LSC_Dist_Susp	
160-43084-27	FSS-043-081321	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526978/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526978/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43084-8 MS	FSS-024-081221	Total/NA	Solid	LSC_Dist_Susp	
160-43084-8 DU	FSS-024-081221	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43084-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43079-A-2-F DU	Duplicate	77.8	93.8
160-43084-1	FSS-017-081221	80.6	92.3
160-43084-2	FSS-018-081221	79.9	92.0
160-43084-3	FSS-019-081221	77.9	93.5
160-43084-4	FSS-020-081221	80.2	92.7
160-43084-5	FSS-021-081221	83.0	94.2
160-43084-6	FSS-022-081221	89.7	81.9
160-43084-6 DU	FSS-022-081221	86.4	87.5
160-43084-7	FSS-023-081221	90.5	90.5
160-43084-8	FSS-024-081221	92.8	89.7
160-43084-9	FSS-025-081221	90.1	84.1
160-43084-10	FSS-026-081221	84.8	87.1
160-43084-11	FSS-027-081221	85.6	83.7
160-43084-12	FSS-028-081221	83.7	86.4
160-43084-13	FSS-029-081321	88.4	90.8
160-43084-14	FSS-030-081321	88.2	93.1
160-43084-15	FSS-031-081321	84.5	89.0
160-43084-16	FSS-032-081321	85.1	89.7
160-43084-17	FSS-033-081321	86.3	90.1
160-43084-18	FSS-034-081321	84.7	91.2
160-43084-19	FSS-035-081321	85.3	90.5
160-43084-20	FSS-036-081321	80.2	86.4
160-43084-21	FSS-037-081321	83.2	91.6
160-43084-22	FSS-038-081321	85.7	90.5
160-43084-23	FSS-039-081321	86.7	90.1
160-43084-24	FSS-040-081321	84.3	93.1
160-43084-25	FSS-041-081321	84.1	92.7
160-43084-26	FSS-042-081321	83.6	90.1
160-43084-26 DU	FSS-042-081321	81.7	91.6
160-43084-27	FSS-043-081321	80.2	90.5
LCS 160-524352/1-A	Lab Control Sample	86.9	92.7
LCS 160-525600/2-A	Lab Control Sample	73.1	83.4
LCS 160-525601/2-A	Lab Control Sample	89.8	90.5
MB 160-524352/23-A	Method Blank	89.9	93.1
MB 160-525600/1-A	Method Blank	79.2	80.0
MB 160-525601/1-A	Method Blank	90.1	89.3

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-236 (T) (30-110)
160-43084-1	FSS-017-081221	68.4
160-43084-1 DU	FSS-017-081221	69.1
160-43084-2	FSS-018-081221	74.4

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43084-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-236 (T) (30-110)						
160-43084-3	FSS-019-081221	60.8						
160-43084-4	FSS-020-081221	59.0						
160-43084-5	FSS-021-081221	62.6						
160-43084-6	FSS-022-081221	60.1						
160-43084-7	FSS-023-081221	64.9						
160-43084-8	FSS-024-081221	58.4						
160-43084-9	FSS-025-081221	55.1						
160-43084-10	FSS-026-081221	61.6						
160-43084-11	FSS-027-081221	61.9						
160-43084-12	FSS-028-081221	62.7						
160-43084-13	FSS-029-081321	50.5						
160-43084-14	FSS-030-081321	49.0						
160-43084-15	FSS-031-081321	55.3						
160-43084-16	FSS-032-081321	58.1						
160-43084-17	FSS-033-081321	61.8						
160-43084-18	FSS-034-081321	73.4						
160-43084-19	FSS-035-081321	89.4						
160-43084-19 DU	FSS-035-081321	80.5						
160-43084-20	FSS-036-081321	86.5						
160-43084-21	FSS-037-081321	65.2						
160-43084-22	FSS-038-081321	75.8						
160-43084-23	FSS-039-081321	73.8						
160-43084-24	FSS-040-081321	74.6						
160-43084-25	FSS-041-081321	68.3						
160-43084-26	FSS-042-081321	62.8						
LCS 160-523548/2-A	Lab Control Sample	67.9						
LCS 160-523552/2-A	Lab Control Sample	62.4						
MB 160-523548/1-A	Method Blank	69.6						
MB 160-523552/1-A	Method Blank	79.4						

Tracer/Carrier Legend

Pu-236 (T) = Pu-236 (T)

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43084-27	FSS-043-081321	67.8						
160-43084-27 DU	FSS-043-081321	71.8						
LCS 160-526441/2-A	Lab Control Sample	62.7						
MB 160-526441/1-A	Method Blank	81.8						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43084-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43084-1	FSS-017-081221	65.5						
160-43084-1 DU	FSS-017-081221	71.5						
160-43084-2	FSS-018-081221	70.3						
160-43084-3	FSS-019-081221	66.6						
160-43084-4	FSS-020-081221	64.2						
160-43084-5	FSS-021-081221	62.7						
160-43084-6	FSS-022-081221	66.3						
160-43084-7	FSS-023-081221	64.6						
160-43084-8	FSS-024-081221	69.7						
160-43084-9	FSS-025-081221	65.3						
160-43084-10	FSS-026-081221	74.9						
160-43084-11	FSS-027-081221	63.6						
160-43084-12	FSS-028-081221	62.8						
160-43084-13	FSS-029-081321	62.9						
160-43084-14	FSS-030-081321	56.8						
160-43084-15	FSS-031-081321	66.2						
160-43084-16	FSS-032-081321	67.3						
160-43084-17	FSS-033-081321	66.3						
160-43084-18	FSS-034-081321	76.9						
160-43084-19	FSS-035-081321	93.1						
160-43084-19 DU	FSS-035-081321	88.8						
160-43084-20	FSS-036-081321	93.2						
160-43084-21	FSS-037-081321	89.7						
160-43084-22	FSS-038-081321	87.1						
160-43084-23	FSS-039-081321	79.5						
160-43084-24	FSS-040-081321	81.8						
160-43084-25	FSS-041-081321	83.8						
160-43084-26	FSS-042-081321	71.1						
160-43084-27	FSS-043-081321	79.5						
LCS 160-523551/2-A	Lab Control Sample	74.9						
LCS 160-523553/2-A	Lab Control Sample	86.0						
MB 160-523551/1-A	Method Blank	68.9						
MB 160-523553/1-A	Method Blank	85.9						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43079-A-7-E DU	Duplicate	80.1						
160-43084-1	FSS-017-081221	87.3						
160-43084-2	FSS-018-081221	84.6						
160-43084-3	FSS-019-081221	80.7						
160-43084-4	FSS-020-081221	85.9						
160-43084-5	FSS-021-081221	76.6						
160-43084-6	FSS-022-081221	84.6						
160-43084-7	FSS-023-081221	99.2						

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43084-8	FSS-024-081221	92.1						
160-43084-9	FSS-025-081221	97.6						
160-43084-9 DU	FSS-025-081221	105						
160-43084-10	FSS-026-081221	102						
160-43084-11	FSS-027-081221	87.6						
160-43084-12	FSS-028-081221	108						
160-43084-13	FSS-029-081321	100						
160-43084-14	FSS-030-081321	97.3						
160-43084-15	FSS-031-081321	97.6						
160-43084-16	FSS-032-081321	99.0						
160-43084-17	FSS-033-081321	107						
160-43084-18	FSS-034-081321	105						
160-43084-19	FSS-035-081321	98.5						
160-43084-20	FSS-036-081321	99.8						
160-43084-21	FSS-037-081321	101						
160-43084-22	FSS-038-081321	95.3						
160-43084-23	FSS-039-081321	97.5						
160-43084-24	FSS-040-081321	104						
160-43084-25	FSS-041-081321	98.4						
160-43084-26	FSS-042-081321	89.6						
160-43084-27	FSS-043-081321	102						
160-43113-D-13-J DU	Duplicate	102						
LCS 160-524237/2-A	Lab Control Sample	78.7						
LCS 160-524260/2-A	Lab Control Sample	96.8						
LCS 160-526025/2-A	Lab Control Sample	103						
MB 160-524237/1-A	Method Blank	59.8						
MB 160-524260/1-A	Method Blank	86.4						
MB 160-526025/1-A	Method Blank	115 Q						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-236 (T) (30-110)						
160-43084-1	FSS-017-081221	68.4						
160-43084-1 DU	FSS-017-081221	69.1						
160-43084-2	FSS-018-081221	74.4						
160-43084-3	FSS-019-081221	60.8						
160-43084-4	FSS-020-081221	59.0						
160-43084-5	FSS-021-081221	62.6						
160-43084-6	FSS-022-081221	60.1						
160-43084-7	FSS-023-081221	64.9						
160-43084-8	FSS-024-081221	58.4						
160-43084-9	FSS-025-081221	55.1						
160-43084-10	FSS-026-081221	61.6						
160-43084-11	FSS-027-081221	61.9						
160-43084-12	FSS-028-081221	62.7						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43084-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-236 (T) (30-110)						
160-43084-13	FSS-029-081321	50.5						
160-43084-14	FSS-030-081321	49.0						
160-43084-15	FSS-031-081321	55.3						
160-43084-16	FSS-032-081321	58.1						
160-43084-17	FSS-033-081321	61.8						
160-43084-18	FSS-034-081321	73.4						
160-43084-19	FSS-035-081321	89.4						
160-43084-19 DU	FSS-035-081321	80.5						
160-43084-20	FSS-036-081321	86.5						
160-43084-21	FSS-037-081321	65.2						
160-43084-22	FSS-038-081321	75.8						
160-43084-23	FSS-039-081321	73.8						
160-43084-24	FSS-040-081321	74.6						
160-43084-25	FSS-041-081321	68.3						
160-43084-26	FSS-042-081321	62.8						
LCS 160-524258/2-A	Lab Control Sample	67.9						
LCS 160-524346/2-A	Lab Control Sample	62.4						
MB 160-524258/1-A	Method Blank	69.6						
MB 160-524346/1-A	Method Blank	79.4						

Tracer/Carrier Legend

Pu-236 (T) = Pu-236 (T)

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43084-27	FSS-043-081321	67.8						
160-43084-27 DU	FSS-043-081321	71.8						
LCS 160-526529/2-A	Lab Control Sample	62.7						
MB 160-526529/1-A	Method Blank	81.8						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/27/2021
Sample Receipt Date	08/17/2021
RJ Lee Group Job No.	AOH1063128-0
Authorization/P.O. No.	160-43084-1
Client Job No./Name	

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545957.HPL	FSS-017-081221 (160-43084-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545958.HPL	FSS-018-081221 (160-43084-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545959.HPL	FSS-019-081221 (160-43084-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Powder 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545960.HPL	FSS-020-081221 (160-43084-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545961.HPL	FSS-021-081221 (160-43084-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545962.HPL	FSS-022-081221 (160-43084-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545963.HPL	FSS-023-081221 (160-43084-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545964.HPL	FSS-024-081221 (160-43084-8)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545965.HPL	FSS-025-081221 (160-43084-9)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545966.HPL	FSS-026-081221 (160-43084-10)	Yes	1	ND		100.00	Q, AM, F, OP, M	EAF-09/27/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545967.HPL	FSS-027-081221 (160-43084-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545968.HPL	FSS-028-081221 (160-43084-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545969.HPL	FSS-029-081221 (160-43084-13)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545970.HPL	FSS-030-081221 (160-43084-14)	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	EAF-09/24/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545971.HPL	FSS-031-081221 (160-43084-15)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545972.HPL	FSS-032-081221 (160-43084-16)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545973.HPL	FSS-033-081221 (160-43084-17)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545974.HPL	FSS-034-081221 (160-43084-18)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545975.HPL	FSS-035-081221 (160-43084-19)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545976.HPL	FSS-036-081221 (160-43084-20)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545977.HPL	FSS-037-081221 (160-43084-21)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545978.HPL	FSS-038-081221 (160-43084-22)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/27/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10545979.HPL	FSS-039-081221 (160-43084-23)	Yes	1	ND		100.00	Q, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545980.HPL	FSS-040-081221 (160-43084-24)	Yes	1	ND		100.00	Q, AM, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545981.HPL	FSS-041-081221 (160-43084-25)	Yes	1	ND		100.00	Q, AM, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10545982.HPL	FSS-042-081221 (160-43084-26)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/27/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10545983.HPL	FSS-043-081221 (160-43084-27)	Yes	1	ND		100.00	Q, OP, MI, M	EAF-09/25/2021

Description: Beige Sediment
4 Slides Scanned. No Asbestos Detected.
NY ELAP Method 198.1.

Weight Loss: 0.0%

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43084-1 RJ Lee Group Job No: AOH1063128-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.3
Samples FSS-044 through -058

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43113-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
9/23/2021 1:22:28 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-43113-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43113-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/18/2021 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.5º C, 26.3º C and 26.8º C.

Receipt Exceptions

Job ID: 160-43113-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The sample was received in a broken 8oz container. The plastic bag included more than sufficient volume for all requested analyses; therefore, a new 8oz container was subsampled from the plastic bag: FSS-057-081721 (160-43113-15).

ASBESTOS
An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)
Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/08/2021 and analyzed on 09/09/2021.

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

MERCURY (CVAA)
Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/10/2021.

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

PERCENT SOLIDS
Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/27/2021.

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

STRONTIUM-90 (GFPC)
Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/20/2021, prepared on 09/04/2021 and analyzed on 09/20/2021.

Preparation Batch 160-525601:
Method DPS-7: The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix. The samples had large rocks >2mm: FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17), and FSS-258-081721 (160-43113-18).

The sample was counted on a detector that failed the closing daily check slightly low. The detector passed the day the sample counted. The lab does not believe that the 3% low result for the closing daily check significantly affects the sample results. Therefore, the data was

Job ID: 160-43113-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

reported: FSS-054-081721 (160-43113-11).

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

TRITIUM

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/03/2021 and analyzed on 09/08/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/20/2021, prepared on 08/29/2021 and 08/31/2021 and analyzed on 09/09/2021 and 09/10/2021.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/20/2021, prepared on 08/29/2021 and 08/31/2021 and analyzed on 09/08/2021, 09/09/2021 and 09/10/2021.

Preparation Batch 160-524626:
Detectors AV83, AV86 AV95, and AV96 were calibrated in August, therefore; the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-047-081721 (160-43113-4), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), and FSS-051-081721 (160-43113-8).

Preparation Batch 160-524624:
Detectors AV131-AV142 were calibrated in August, therefore; the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: (LCS 160-524624/2-A), (MB 160-524624/1-A), (160-43079-A-2-G), and (160-43079-A-2-H DU).

Preparation Batch 160-524992:
Detectors AV131-AV146 were calibrated in August, therefore; the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17), and FSS-258-081721 (160-43113-18).

Preparation Batch 160-424999:
Detectors AV95, AV96, AV97 and V161 were calibrated in August, therefore; the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable.

Job ID: 160-43113-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

This CCV is not applicable: FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), and FSS-058-081721 (160-43113-17).

Preparation Batch 160-523941:
The detection goal of 0.200 pCi/g was not met for Ra-226 for the following sample. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent "force-fit" of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, as the Ra-226 result is below the RL and MDC: FSS-257-081721 (160-43113-16).

The sample exhibited a negative result greater in magnitude than the 3 sigma TPU for Am-241. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: FSS-257-081721 (160-43113-16).

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

CARBON-14 BY LSC

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/16/2021 and 09/17/2021 and analyzed on 09/17/2021 and 09/18/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/20/2021, prepared on 08/24/2021 and analyzed on 09/16/2021 and 09/17/2021.

Preparation Batch 160-523941:
For samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17), FSS-258-081721 (160-43113-18), (LCS 160-523941/2-A), (MB 160-523941/1-A), and (160-43113-D-18-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108

Job ID: 160-43113-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/20/2021, prepared on 09/08/2021 and analyzed on 09/17/2021 and 09/18/2021.

Preparation Batch 160-526025:
The nickel carrier recoveries were outside the upper acceptance limit. The carrier recoveries have been truncated to minimize any potential bias a high carrier may have on the results: FSS-044-081721 (160-43113-1) and (MB 160-526025/1-A).

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

PLUTONIUM 241

Samples FSS-044-081721 (160-43113-1), FSS-045-081721 (160-43113-2), FSS-046-081721 (160-43113-3), FSS-047-081721 (160-43113-4), FSS-048-081721 (160-43113-5), FSS-049-081721 (160-43113-6), FSS-050-081721 (160-43113-7), FSS-051-081721 (160-43113-8), FSS-052-081721 (160-43113-9), FSS-053-081721 (160-43113-10), FSS-054-081721 (160-43113-11), FSS-055-081721 (160-43113-12), FSS-056-081721 (160-43113-13), FSS-256-081721 (160-43113-14), FSS-057-081721 (160-43113-15), FSS-257-081721 (160-43113-16), FSS-058-081721 (160-43113-17) and FSS-258-081721 (160-43113-18) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 08/29/2021 and 08/31/2021 and analyzed on 09/15/2021 and 09/16/2021.

Preparation Batch 160-525000:
The samples were switched during the original analysis then recounted. All samples in the batch have results below the MDC and reporting limit (RL). Therefore the data was not adversely affected: FSS-257-081721 (160-43113-16) and (LCS 160-525000/2-A).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

160-43113 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing TestAmerica

☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-17-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___2___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-044-081721	17-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS02 0-6"
FSS-045-081721	17-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS02 6"-12"
FSS-046-081721	17-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS02 18"-24"
FSS-047-081721	17-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS03 0"-6"
FSS-048-081721	17-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS03 6"-12"
FSS-049-081721	17-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS03 18"-24"
FSS-050-081721	17-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS04 0"-6"
FSS-051-081721	17-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS04 6"-12"
FSS-052-081721	17-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS04 18"-24"
FSS-053-081721	17-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS05 0"-6"
FSS-054-081721	17-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS05 6"-12"
FSS-055-081721	17-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS05 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40,Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-17-21/17:00	Received by:Fed Ex FED EX	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: AUG 18 2021 09:01 Micha Reichinger	Company: EMA SRL	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-17-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-053-081721 ms/msd	17-Aug	10:00	C	S	1	N	N				1	1							SU 7B - SS05 0"-6"
FSS-054-081721 ms/msd	17-Aug	10:00	C	S	1	N	N				1	1							SU 7B - SS05 6"-12"
FSS-055-081721 ms/msd	17-Aug	10:00	C	S	1	N	N				1	1							SU 7B - SS05 18"-24"
FSS-056-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 0"-6"
FSS-256-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 0"-6"
FSS-057-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 6"-12"
FSS-257-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 6"-12"
FSS-058-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 18"-24"
FSS-258-081721	17-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS06 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40,Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-17-21/17:00	Received by:Fed Ex FED EX Company: Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: AUG 18 2021 09:01 Company: Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Company: Date/Time:

Form No. CA-C-WI-002, [illegible].33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217816.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43113-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/15/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-044-081721 (160-43113-1)	8/17/21	08:30 Eastern		Solid			X	X	X	1	
FSS-045-081721 (160-43113-2)	8/17/21	08:30 Eastern		Solid			X	X	X	1	
FSS-046-081721 (160-43113-3)	8/17/21	08:30 Eastern		Solid			X	X	X	1	
FSS-047-081721 (160-43113-4)	8/17/21	08:45 Eastern		Solid			X	X	X	1	
FSS-048-081721 (160-43113-5)	8/17/21	08:45 Eastern		Solid			X	X	X	1	
FSS-049-081721 (160-43113-6)	8/17/21	08:45 Eastern		Solid			X	X	X	1	
FSS-050-081721 (160-43113-7)	8/17/21	10:30 Eastern		Solid			X	X	X	1	
FSS-051-081721 (160-43113-8)	8/17/21	10:30 Eastern		Solid			X	X	X	1	
FSS-052-081721 (160-43113-9)	8/17/21	10:30 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Micha Konin kiewicz	8/19/21 17:30	~~ETA~~ STL		08/20/2021 0935	ETADEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2 IR 11 +1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217816.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43113-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/15/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-053-081721 (160-43113-10)	8/17/21	10:00 Eastern		Solid			X	X	X	1	
FSS-053-081721 (160-43113-10MS)	8/17/21	10:00 Eastern	MS	Solid			X	X	X	1	
FSS-053-081721 (160-43113-10MSD)	8/17/21	10:00 Eastern	MSD	Solid			X	X	X	1	
FSS-054-081721 (160-43113-11)	8/17/21	10:00 Eastern		Solid			X	X	X	1	
FSS-054-081721 (160-43113-11MS)	8/17/21	10:00 Eastern	MS	Solid			X	X	X	1	
FSS-054-081721 (160-43113-11MSD)	8/17/21	10:00 Eastern	MSD	Solid			X	X	X	1	
FSS-055-081721 (160-43113-12)	8/17/21	10:00 Eastern		Solid			X	X	X	1	
FSS-055-081721 (160-43113-12MS)	8/17/21	10:00 Eastern	MS	Solid			X	X	X	1	
FSS-055-081721 (160-43113-12MSD)	8/17/21	10:00 Eastern	MSD	Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by: Micha Kennings	Date/Time: 8/19/21 17:30	Company ETA SL	Received by:	Date/Time: 08/20/2021 0935	Company ETA DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217816.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43113-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/15/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-056-081721 (160-43113-13)	8/17/21	08:00 Eastern		Solid			X	X	X	1	
FSS-256-081721 (160-43113-14)	8/17/21	08:00 Eastern		Solid			X	X	X	1	
FSS-057-081721 (160-43113-15)	8/17/21	08:00 Eastern		Solid			X	X	X	1	
FSS-257-081721 (160-43113-16)	8/17/21	08:00 Eastern		Solid			X	X	X	1	
FSS-058-081721 (160-43113-17)	8/17/21	08:00 Eastern		Solid			X	X	X	1	
FSS-258-081721 (160-43113-18)	8/17/21	08:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Micha Kerninger	8/19/21 17:30	ETA SRL		08/20/2021 0935	ETA SRL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOHNG 3198-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217817.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43113-1
Address: 350 Hochberg Rd,	Due Date Requested: 9/16/2021	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			Other:
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos)/ Asbestos	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-044-081721 (160-43113-1)	8/17/21	08:30 Eastern		Solid			X	1	
FSS-045-081721 (160-43113-2)	8/17/21	08:30 Eastern		Solid			X	1	
FSS-046-081721 (160-43113-3)	8/17/21	08:30 Eastern		Solid			X	1	
FSS-047-081721 (160-43113-4)	8/17/21	08:45 Eastern		Solid			X	1	
FSS-048-081721 (160-43113-5)	8/17/21	08:45 Eastern		Solid			X	1	
FSS-049-081721 (160-43113-6)	8/17/21	08:45 Eastern		Solid			X	1	
FSS-050-081721 (160-43113-7)	8/17/21	10:30 Eastern		Solid			X	1	
FSS-051-081721 (160-43113-8)	8/17/21	10:30 Eastern		Solid			X	1	
FSS-052-081721 (160-43113-9)	8/17/21	10:30 Eastern		Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kerninger	8/19/21 18:00	ETA SL	M. Carroll	08-20-21 9:00 am	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Angie Maugeri	08-23-2021 7:00 Am	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063198O

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217617.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43113-1
Address: 350 Hochberg Rd,	Due Date Requested: 9/16/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: PA, 15146				
Phone:	PO #:			Other:
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos/ Asbestos	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-053-081721 (160-43113-10)	8/17/21	10:00 Eastern		Solid			X	1	
FSS-054-081721 (160-43113-11)	8/17/21	10:00 Eastern		Solid			X	1	
FSS-055-081721 (160-43113-12)	8/17/21	10:00 Eastern		Solid			X	1	
FSS-056-081721 (160-43113-13)	8/17/21	08:00 Eastern		Solid			X	1	
FSS-256-081721 (160-43113-14)	8/17/21	08:00 Eastern		Solid			X	1	
FSS-057-081721 (160-43113-15)	8/17/21	08:00 Eastern		Solid			X	1	
FSS-257-081721 (160-43113-16)	8/17/21	08:00 Eastern		Solid			X	1	
FSS-058-081721 (160-43113-17)	8/17/21	08:00 Eastern		Solid			X	1	
FSS-258-081721 (160-43113-18)	8/17/21	08:00 Eastern		Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Micha Konichiga	Date/Time: 8/19/21 18:00	Company: EMSL	Received by: M. Carrier
Relinquished by:	Date/Time:	Company	Received by: Linda Mawzeen
Relinquished by:	Date/Time:	Company	Received by:

Received by:	Date/Time:	Company
M. Carrier	08-20-21 9:00am	RJ Lee Group
Linda Mawzeen	08-232021 7:00AM	RJ Lee Group

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43113-1

Login Number: 43113
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	FSS-057-081721: the 8oz jar was received broken; a new jar was generated from
Sample collection date/times are provided.	True	the contents of the plastic bag, which has sufficient volume for all analyses.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43113-1

Login Number: 43113
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 08/20/21 08:08 PM

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43113-1

Login Number: 43113
List Number: 3
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 08/21/21 11:28 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43113-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43113-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	PLM EPA 600/R-93 116	EPA	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43113-1	FSS-044-081721	Solid	08/17/21 08:30	08/18/21 13:02
160-43113-2	FSS-045-081721	Solid	08/17/21 08:30	08/18/21 13:02
160-43113-3	FSS-046-081721	Solid	08/17/21 08:30	08/18/21 13:02
160-43113-4	FSS-047-081721	Solid	08/17/21 08:45	08/18/21 13:02
160-43113-5	FSS-048-081721	Solid	08/17/21 08:45	08/18/21 13:02
160-43113-6	FSS-049-081721	Solid	08/17/21 08:45	08/18/21 13:02
160-43113-7	FSS-050-081721	Solid	08/17/21 10:30	08/18/21 13:02
160-43113-8	FSS-051-081721	Solid	08/17/21 10:30	08/18/21 13:02
160-43113-9	FSS-052-081721	Solid	08/17/21 10:30	08/18/21 13:02
160-43113-10	FSS-053-081721	Solid	08/17/21 10:00	08/18/21 13:02
160-43113-11	FSS-054-081721	Solid	08/17/21 10:00	08/18/21 13:02
160-43113-12	FSS-055-081721	Solid	08/17/21 10:00	08/18/21 13:02
160-43113-13	FSS-056-081721	Solid	08/17/21 08:00	08/18/21 13:02
160-43113-14	FSS-256-081721	Solid	08/17/21 08:00	08/18/21 13:02
160-43113-15	FSS-057-081721	Solid	08/17/21 08:00	08/18/21 13:02
160-43113-16	FSS-257-081721	Solid	08/17/21 08:00	08/18/21 13:02
160-43113-17	FSS-058-081721	Solid	08/17/21 08:00	08/18/21 13:02
160-43113-18	FSS-258-081721	Solid	08/17/21 08:00	08/18/21 13:02

Client Sample ID: FSS-044-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.232	U	0.183	0.184	3.00	0.295	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.8*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*87.9*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0330	U	0.221	0.221	1.00	0.407	pCi/g	09/03/21 13:48	09/08/21 10:20	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00950	U	0.0298	0.0298	1.00	0.0996	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.00951	U	0.0256	0.0256	1.00	0.0614	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*54.2*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0246	U	0.0395	0.0396	1.00	0.0680	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.0704**		0.0592	0.0595	1.00	0.0697	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*61.0*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:03*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.191	U	0.450	0.450	5.00	0.774	pCi/g	09/17/21 06:21	09/17/21 23:26	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.258**		0.130	0.132		0.217	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Americium-241	0.0417	U	0.152	0.152		0.262	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Bismuth-212	0.271	U	0.528	0.529		0.922	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Bismuth-214	**0.297**		0.0836	0.0889		0.0703	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Cesium-137	-0.0347	U	0.0483	0.0484		0.104	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Cobalt-60	0.0293	U	0.0217	0.0219		0.0309	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Europium-152	0.0613	U	0.161	0.161		0.147	pCi/g	08/24/21 16:40	09/16/21 10:20	1

Client Sample ID: FSS-044-081721

Lab Sample ID: 160-43113-1

Date Collected: 08/17/21 08:30

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0103	U	0.0131	0.0131		0.108	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Europium-155	**0.145**		0.0923	0.0936		0.112	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Lead-212	**0.321**		0.0731	0.0837		0.0811	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Lead-214	**0.305**		0.0766	0.0827		0.0796	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Potassium-40	**2.51**		0.717	0.760		0.651	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Radium-226	**0.297**		0.0836	0.0889	0.200	0.0703	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Sodium-22	-0.0284	U	0.0496	0.0497		0.0865	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Thorium-232	**0.258**		0.130	0.132		0.217	pCi/g	08/24/21 16:40	09/16/21 10:20	1
Zinc-65	-0.00402	U	0.0788	0.0788		0.186	pCi/g	08/24/21 16:40	09/16/21 10:20	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.113*		*0.0392*	*0.0409*		*0.0326*	*pCi/g*	*08/24/21 16:40*	*09/16/21 10:20*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.11	U	0.884	0.891	5.00	1.49	pCi/g	09/08/21 16:09	09/17/21 06:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*123*	*Q*	*40 - 110*	*09/08/21 16:09*	*09/17/21 06:24*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-4.47	U	1.95	1.99	5.00	3.82	pCi/g	08/29/21 20:28	09/16/21 06:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*54.2*		*30 - 110*	*08/29/21 20:28*	*09/16/21 06:05*	*1*

Client Sample ID: FSS-044-081721

Lab Sample ID: 160-43113-1

Date Collected: 08/17/21 08:30

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.9**		0.21	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 19:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**25**		19	6.3	ug/Kg	☼	09/10/21 17:45	09/10/21 20:33	1

Client Sample ID: FSS-045-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-2

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0262	U	0.189	0.189	3.00	0.341	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*89.0*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.179	U	0.251	0.251	1.00	0.428	pCi/g	09/03/21 13:48	09/08/21 10:43	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00925	U	0.00907	0.00910	1.00	0.0618	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00232	U	0.00454	0.00454	1.00	0.0448	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.3*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0334	U	0.0416	0.0417	1.00	0.0587	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.107**		0.0668	0.0674	1.00	0.0650	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.7*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:03*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0656	U	0.397	0.397	5.00	0.674	pCi/g	09/17/21 06:21	09/18/21 01:06	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.205**		0.164	0.166		0.177	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Americium-241	0.0430	U	0.101	0.101		0.173	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Bismuth-212	0.116	U	0.548	0.548		0.976	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Bismuth-214	**0.254**		0.0800	0.0840		0.0803	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Cesium-137	**0.0865**		0.0275	0.0289		0.0168	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Cobalt-60	0.000	U	0.00926	0.00926		0.0246	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Europium-152	0.0626	U	0.114	0.114		0.120	pCi/g	08/24/21 16:40	09/16/21 10:59	1

Client Sample ID: FSS-045-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-2

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	-0.00190	U	0.0445	0.0445		0.0790	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Europium-155	0.0303	U	0.198	0.198		0.339	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Lead-212	**0.315**		0.0579	0.0703		0.0511	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Lead-214	**0.310**		0.0707	0.0774		0.0634	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Potassium-40	**2.35**		0.619	0.662		0.542	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Radium-226	**0.254**		0.0800	0.0840	0.200	0.0803	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Sodium-22	-0.0323	U	0.0419	0.0421		0.0707	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Thorium-232	**0.205**		0.164	0.166		0.177	pCi/g	08/24/21 16:40	09/16/21 10:59	1
Zinc-65	0.000	U	0.0112	0.0112		0.158	pCi/g	08/24/21 16:40	09/16/21 10:59	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.0767*		*0.0341*	*0.0350*		*0.0369*	*pCi/g*	*08/24/21 16:40*	*09/16/21 10:59*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.949	U	0.899	0.904	5.00	1.51	pCi/g	09/08/21 16:09	09/17/21 07:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.9*		*40 - 110*	*09/08/21 16:09*	*09/17/21 07:30*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.293	U	1.51	1.51	5.00	2.65	pCi/g	08/29/21 20:28	09/16/21 07:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.3*		*30 - 110*	*08/29/21 20:28*	*09/16/21 07:11*	*1*

Client Sample ID: FSS-045-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-2

Matrix: Solid
Percent Solids: 96.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.3**		0.22	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 19:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**16**	**J**	20	6.6	ug/Kg	☼	09/10/21 17:45	09/10/21 20:35	1

Client Sample ID: FSS-046-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-3

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.291	U	0.220	0.221	3.00	0.353	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.9*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*81.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**11.3**		0.733	1.22	1.00	0.409	pCi/g	09/03/21 13:48	09/08/21 11:06	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00867	U	0.0272	0.0272	1.00	0.0909	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	-0.00289	U	0.00567	0.00567	1.00	0.0560	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*59.3*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0379**		0.0429	0.0430	1.00	0.0379	pCi/g	08/29/21 20:35	09/08/21 14:03	1
Uranium-238	**0.142**		0.0743	0.0752	1.00	0.0304	pCi/g	08/29/21 20:35	09/08/21 14:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.0*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:03*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.357	U	0.604	0.605	5.00	1.05	pCi/g	09/17/21 06:21	09/18/21 01:40	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.428**		0.156	0.162		0.234	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Americium-241	0.0427	U	0.161	0.161		0.278	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Bismuth-212	0.330	U	0.585	0.586		1.02	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Bismuth-214	**0.364**		0.108	0.115		0.0946	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Cesium-137	-0.0210	U	0.0613	0.0614		0.106	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Cobalt-60	0.0256	U	0.0510	0.0511		0.0608	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Europium-152	0.0547	U	0.0591	0.0594		0.184	pCi/g	08/24/21 16:40	09/17/21 13:13	1

Client Sample ID: FSS-046-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-3

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0764	U	0.125	0.125		0.129	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Europium-155	-0.0763	U	0.126	0.127		0.340	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Lead-212	**0.428**		0.0821	0.0985		0.0800	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Lead-214	**0.299**		0.0863	0.0915		0.0780	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Potassium-40	**1.57**		0.632	0.651		0.701	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Radium-226	**0.364**		0.108	0.115	0.200	0.0946	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Sodium-22	-0.0160	U	0.0428	0.0428		0.0783	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Thorium-232	**0.428**		0.156	0.162		0.234	pCi/g	08/24/21 16:40	09/17/21 13:13	1
Zinc-65	-0.0162	U	0.0427	0.0427		0.217	pCi/g	08/24/21 16:40	09/17/21 13:13	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/24/21 16:40*	*09/17/21 13:13*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**13.0**		1.24	1.81	5.00	1.36	pCi/g	09/08/21 16:09	09/17/21 08:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/08/21 16:09*	*09/17/21 08:37*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.92	U	1.76	1.77	5.00	3.19	pCi/g	08/29/21 20:28	09/16/21 08:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*59.3*		*30 - 110*	*08/29/21 20:28*	*09/16/21 08:17*	*1*

Client Sample ID: FSS-046-081721

Date Collected: 08/17/21 08:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-3

Matrix: Solid
Percent Solids: 96.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.86**		0.23	0.014	mg/Kg	☼	09/08/21 14:58	09/09/21 19:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**7.0**	**J**	18	5.8	ug/Kg	☼	09/10/21 17:45	09/10/21 20:38	1

Client Sample ID: FSS-047-081721

Date Collected: 08/17/21 08:45
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-4

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.161	U	0.186	0.187	3.00	0.314	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.3*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*92.3*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0711	U	0.210	0.211	1.00	0.389	pCi/g	09/03/21 13:48	09/08/21 11:28	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0111	U	0.0291	0.0291	1.00	0.0854	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.00222	U	0.0189	0.0189	1.00	0.0549	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.8*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00595	U	0.00824	0.00826	1.00	0.0666	pCi/g	08/29/21 20:35	09/08/21 14:01	1
Uranium-238	**0.277**		0.105	0.107	1.00	0.0783	pCi/g	08/29/21 20:35	09/08/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.3*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:01*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.180	U	0.562	0.562	5.00	0.960	pCi/g	09/17/21 06:21	09/18/21 02:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.333**		0.155	0.158		0.243	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Americium-241	-0.00436	U	0.160	0.160		0.279	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Bismuth-212	0.0261	U	0.570	0.570		1.06	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Bismuth-214	**0.408**		0.123	0.130		0.118	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Cesium-137	**0.190**		0.0745	0.0770		0.0652	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Cobalt-60	0.0328	U	0.0243	0.0245		0.0345	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Europium-152	0.0324	U	0.110	0.110		0.190	pCi/g	08/24/21 16:40	09/16/21 11:00	1

Client Sample ID: FSS-047-081721

Lab Sample ID: 160-43113-4

Date Collected: 08/17/21 08:45

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0346	U	0.0787	0.0788		0.135	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Europium-155	0.0434	U	0.135	0.135		0.330	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Lead-212	**0.407**		0.0852	0.0996		0.0910	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Lead-214	**0.382**		0.107	0.114		0.0989	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Potassium-40	**3.37**		0.863	0.927		0.727	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Radium-226	**0.408**		0.123	0.130	0.200	0.118	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Sodium-22	**0.0362**		0.0251	0.0253		0.0334	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Thorium-232	**0.333**		0.155	0.158		0.243	pCi/g	08/24/21 16:40	09/16/21 11:00	1
Zinc-65	-0.00449	U	0.140	0.140		0.261	pCi/g	08/24/21 16:40	09/16/21 11:00	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.234*		*0.0633*	*0.0676*		*0.0485*	*pCi/g*	*08/24/21 16:40*	*09/16/21 11:00*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.540	U	0.858	0.860	5.00	1.48	pCi/g	09/08/21 16:09	09/17/21 09:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/08/21 16:09*	*09/17/21 09:43*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.59	U	1.35	1.35	5.00	2.51	pCi/g	08/29/21 20:28	09/16/21 09:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.8*		*30 - 110*	*08/29/21 20:28*	*09/16/21 09:24*	*1*

Client Sample ID: FSS-047-081721

Lab Sample ID: 160-43113-4

Date Collected: 08/17/21 08:45

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 95.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**7.6**		0.29	0.018	mg/Kg	☼	09/08/21 14:58	09/09/21 19:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**85**		18	5.9	ug/Kg	☼	09/10/21 17:45	09/10/21 20:40	1

Client Sample ID: FSS-048-081721

Date Collected: 08/17/21 08:45
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-5

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.159	U	0.203	0.204	3.00	0.345	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.9*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0175	U	0.222	0.222	1.00	0.409	pCi/g	09/03/21 13:48	09/08/21 11:51	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0119	U	0.0287	0.0287	1.00	0.0979	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.0209	U	0.0336	0.0337	1.00	0.0578	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.2*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0447**		0.0506	0.0507	1.00	0.0447	pCi/g	08/29/21 20:35	09/09/21 12:17	1
Uranium-238	**0.191**		0.0937	0.0950	1.00	0.0359	pCi/g	08/29/21 20:35	09/09/21 12:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*58.0*		*30 - 110*	*08/29/21 20:35*	*09/09/21 12:17*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0735	U	0.442	0.442	5.00	0.750	pCi/g	09/17/21 06:21	09/18/21 02:47	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.336**		0.0945	0.100		0.117	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Americium-241	0.0470	U	0.108	0.108		0.184	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Bismuth-212	0.0288	U	0.434	0.434		0.802	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Bismuth-214	**0.162**		0.0682	0.0701		0.0805	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Cesium-137	0.0256	U	0.0445	0.0445		0.0766	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Cobalt-60	-0.0186	U	0.0563	0.0564		0.0643	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Europium-152	0.0188	U	0.0488	0.0488		0.126	pCi/g	08/24/21 16:40	09/16/21 11:30	1

Client Sample ID: FSS-048-081721

Lab Sample ID: 160-43113-5

Date Collected: 08/17/21 08:45

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0538	U	0.0863	0.0865		0.0774	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Europium-155	0.0206	U	0.0702	0.0702		0.426	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Lead-212	**0.254**		0.0640	0.0717		0.0792	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Lead-214	**0.208**		0.0891	0.0916		0.129	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Potassium-40	**2.64**		0.665	0.716		0.567	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Radium-226	**0.162**		0.0682	0.0701	0.200	0.0805	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Sodium-22	**0.0270**		0.0187	0.0189		0.0249	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Thorium-232	**0.336**		0.0945	0.100		0.117	pCi/g	08/24/21 16:40	09/16/21 11:30	1
Zinc-65	-0.0176	U	0.103	0.103		0.186	pCi/g	08/24/21 16:40	09/16/21 11:30	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.103*		*0.0327*	*0.0344*		*0.0278*	*pCi/g*	*08/24/21 16:40*	*09/16/21 11:30*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.890	U	0.953	0.958	5.00	1.63	pCi/g	09/08/21 16:09	09/17/21 10:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*92.0*		*40 - 110*	*09/08/21 16:09*	*09/17/21 10:49*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.788	U	1.81	1.81	5.00	3.30	pCi/g	08/29/21 20:28	09/16/21 10:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.2*		*30 - 110*	*08/29/21 20:28*	*09/16/21 10:30*	*1*

Client Sample ID: FSS-048-081721

Lab Sample ID: 160-43113-5

Date Collected: 08/17/21 08:45

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.0**		0.21	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 19:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**39**		18	5.8	ug/Kg	☼	09/10/21 17:45	09/10/21 20:43	1

Client Sample ID: FSS-049-081721

Date Collected: 08/17/21 08:45
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-6

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0702	U	0.232	0.232	3.00	0.410	pCi/g	09/04/21 14:31	09/20/21 14:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.9*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*
Y Carrier	*79.6*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.143	U	0.213	0.213	1.00	0.411	pCi/g	09/03/21 13:48	09/08/21 12:14	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00446	U	0.00618	0.00619	1.00	0.0499	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.0156	U	0.0251	0.0252	1.00	0.0432	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*80.1*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00271	U	0.00531	0.00532	1.00	0.0525	pCi/g	08/29/21 20:35	09/08/21 14:01	1
Uranium-238	**0.215**		0.0874	0.0892	1.00	0.0619	pCi/g	08/29/21 20:35	09/08/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*76.7*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:01*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.680	U	0.585	0.589	5.00	1.05	pCi/g	09/17/21 06:21	09/18/21 03:20	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.436**		0.125	0.132		0.0683	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Americium-241	0.0250	U	0.101	0.102		0.135	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Bismuth-212	0.167	U	0.404	0.404		0.719	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Bismuth-214	**0.381**		0.0890	0.0970		0.0763	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Cesium-137	0.0266	U	0.0497	0.0498		0.0858	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Cobalt-60	0.00121	U	0.0400	0.0400		0.0501	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Europium-152	0.0609	U	0.162	0.162		0.134	pCi/g	08/24/21 16:40	09/16/21 12:06	1

Client Sample ID: FSS-049-081721

Date Collected: 08/17/21 08:45
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-6

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0491	U	0.0788	0.0790		0.0833	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Europium-155	0.0244	U	0.0886	0.0886		0.359	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Lead-212	**0.388**		0.0707	0.0861		0.0709	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Lead-214	**0.410**		0.0917	0.101		0.0775	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Potassium-40	**2.05**		0.616	0.649		0.589	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Radium-226	**0.381**		0.0890	0.0970	0.200	0.0763	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Sodium-22	-0.00351	U	0.0407	0.0407		0.0769	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Thorium-232	**0.436**		0.125	0.132		0.0683	pCi/g	08/24/21 16:40	09/16/21 12:06	1
Zinc-65	0.000	U	0.0173	0.0173		0.189	pCi/g	08/24/21 16:40	09/16/21 12:06	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.180*		*0.0423*	*0.0461*		*0.0289*	*pCi/g*	*08/24/21 16:40*	*09/16/21 12:06*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.337	U	0.900	0.901	5.00	1.58	pCi/g	09/08/21 16:09	09/17/21 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*09/08/21 16:09*	*09/17/21 11:55*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.09	U	1.27	1.28	5.00	2.36	pCi/g	08/29/21 20:28	09/16/21 11:36	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*80.1*		*30 - 110*	*08/29/21 20:28*	*09/16/21 11:36*	*1*

Client Sample ID: FSS-049-081721

Date Collected: 08/17/21 08:45
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-6

Matrix: Solid
Percent Solids: 94.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.3**		0.24	0.014	mg/Kg	☼	09/08/21 14:58	09/09/21 19:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**12**	**J**	19	6.3	ug/Kg	☼	09/10/21 17:45	09/10/21 20:46	1

Client Sample ID: FSS-050-081721

Date Collected: 08/17/21 10:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-7

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.179	U	0.180	0.181	3.00	0.363	pCi/g	09/04/21 14:31	09/20/21 14:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*76.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*
Y Carrier	*83.4*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0318	U	0.218	0.218	1.00	0.385	pCi/g	09/03/21 13:48	09/08/21 12:36	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00563	U	0.00780	0.00781	1.00	0.0631	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.000	U	0.0247	0.0247	1.00	0.0753	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.0*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0360**		0.0408	0.0409	1.00	0.0360	pCi/g	08/29/21 20:35	09/08/21 14:01	1
Uranium-238	**0.0867**		0.0604	0.0609	1.00	0.0643	pCi/g	08/29/21 20:35	09/08/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.3*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:01*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.369	U	0.562	0.563	5.00	0.960	pCi/g	09/16/21 08:54	09/17/21 22:41	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.223**		0.0694	0.0729		0.107	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Americium-241	0.0357	U	0.0788	0.0789		0.136	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Bismuth-212	0.211	U	0.345	0.346		0.598	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Bismuth-214	0.0372	U	0.0660	0.0661		0.156	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Cesium-137	0.0138	U	0.0276	0.0276		0.0486	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Cobalt-60	0.00426	U	0.0357	0.0357		0.0441	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Europium-152	0.0920	U	0.146	0.147		0.246	pCi/g	08/24/21 16:40	09/16/21 12:07	1

Client Sample ID: FSS-050-081721

Lab Sample ID: 160-43113-7

Date Collected: 08/17/21 10:30

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0340	U	0.0639	0.0640		0.0753	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Europium-155	0.0198	U	0.0732	0.0732		0.296	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Lead-212	**0.277**		0.0587	0.0684		0.0651	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Lead-214	**0.179**		0.0572	0.0601		0.120	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Potassium-40	**2.35**		0.756	0.792		0.608	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Radium-226	0.0372	U	0.0660	0.0661	0.200	0.156	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Sodium-22	-0.00412	U	0.0483	0.0483		0.0568	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Thorium-232	**0.223**		0.0694	0.0729		0.107	pCi/g	08/24/21 16:40	09/16/21 12:07	1
Zinc-65	0.0369	U	0.0736	0.0737		0.129	pCi/g	08/24/21 16:40	09/16/21 12:07	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/24/21 16:40*	*09/16/21 12:07*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.824	U	0.851	0.855	5.00	1.44	pCi/g	09/08/21 16:09	09/17/21 13:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*103*		*40 - 110*	*09/08/21 16:09*	*09/17/21 13:01*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.88	U	1.67	1.67	5.00	3.11	pCi/g	08/29/21 20:28	09/16/21 12:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.0*		*30 - 110*	*08/29/21 20:28*	*09/16/21 12:42*	*1*

Client Sample ID: FSS-050-081721

Lab Sample ID: 160-43113-7

Date Collected: 08/17/21 10:30

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 96.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.68**		0.24	0.015	mg/Kg	☼	09/08/21 14:58	09/09/21 19:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/10/21 17:45	09/10/21 20:48	1

Client Sample ID: FSS-051-081721

Date Collected: 08/17/21 10:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-8

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0756	U	0.186	0.187	3.00	0.328	pCi/g	09/04/21 14:31	09/20/21 14:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.8*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0804	U	0.235	0.235	1.00	0.415	pCi/g	09/03/21 13:48	09/08/21 12:59	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00306	U	0.0275	0.0275	1.00	0.0870	pCi/g	08/29/21 18:19	09/09/21 13:00	1
Plutonium-239/240	0.000	U	0.00600	0.00600	1.00	0.0367	pCi/g	08/29/21 18:19	09/09/21 13:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*59.7*		*30 - 110*	*08/29/21 18:19*	*09/09/21 13:00*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00652	U	0.00904	0.00905	1.00	0.0730	pCi/g	08/29/21 20:35	09/08/21 14:01	1
Uranium-238	**0.0784**		0.0584	0.0588	1.00	0.0586	pCi/g	08/29/21 20:35	09/08/21 14:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.4*		*30 - 110*	*08/29/21 20:35*	*09/08/21 14:01*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.259	U	0.784	0.785	5.00	1.37	pCi/g	09/16/21 08:54	09/17/21 23:03	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.140	U	0.219	0.219		0.307	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Americium-241	-0.0723	U	0.193	0.193		0.330	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Bismuth-212	**1.04**		0.418	0.431		0.321	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Bismuth-214	**0.274**		0.110	0.113		0.110	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Cesium-137	0.0267	U	0.0502	0.0503		0.0876	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Cobalt-60	-0.00223	U	0.00994	0.00994		0.0935	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Europium-152	0.109	U	0.0854	0.0861		0.164	pCi/g	08/24/21 16:40	09/16/21 11:33	1

Client Sample ID: FSS-051-081721

Lab Sample ID: 160-43113-8
Date Collected: 08/17/21 10:30
Matrix: Solid
Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0128	U	0.0165	0.0166		0.138	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Europium-155	-0.00510	U	0.236	0.236		0.411	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Lead-212	0.0188	U	0.0933	0.0934		0.163	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Lead-214	**0.267**		0.0845	0.0887		0.0996	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Potassium-40	**2.29**		0.792	0.824		0.810	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Radium-226	**0.274**		0.110	0.113	0.200	0.110	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Sodium-22	-0.0302	U	0.0609	0.0610		0.108	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Thorium-232	0.140	U	0.219	0.219		0.307	pCi/g	08/24/21 16:40	09/16/21 11:33	1
Zinc-65	-0.00500	U	0.0932	0.0932		0.137	pCi/g	08/24/21 16:40	09/16/21 11:33	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.127*		*0.0667*	*0.0680*		*0.0605*	*pCi/g*	*08/24/21 16:40*	*09/16/21 11:33*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.340	U	0.817	0.818	5.00	1.48	pCi/g	09/08/21 16:09	09/17/21 14:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.3*		*40 - 110*	*09/08/21 16:09*	*09/17/21 14:08*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.87	U	2.08	2.09	5.00	3.92	pCi/g	08/29/21 20:28	09/16/21 13:48	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*59.7*		*30 - 110*	*08/29/21 20:28*	*09/16/21 13:48*	*1*

Client Sample ID: FSS-051-081721

Lab Sample ID: 160-43113-8
Date Collected: 08/17/21 10:30
Matrix: Solid
Date Received: 08/18/21 13:02
Percent Solids: 97.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.58**		0.21	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 19:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/10/21 17:45	09/10/21 20:56	1

Client Sample ID: FSS-052-081721

Date Collected: 08/17/21 10:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-9

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0992	U	0.203	0.203	3.00	0.354	pCi/g	09/04/21 14:31	09/20/21 14:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.3*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*
Y Carrier	*85.6*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:50*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.147	U	0.246	0.246	1.00	0.423	pCi/g	09/03/21 13:48	09/08/21 13:21	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00211	U	0.00414	0.00414	1.00	0.0409	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.000	U	0.00414	0.00414	1.00	0.0254	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.4*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0216	U	0.0299	0.0300	1.00	0.0324	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.433**		0.120	0.125	1.00	0.0260	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.4*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.128	U	0.759	0.759	5.00	1.34	pCi/g	09/16/21 08:54	09/17/21 23:26	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.655**		0.170	0.182		0.0847	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Americium-241	-0.0628	U	0.154	0.154		0.263	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Bismuth-212	0.326	U	0.609	0.609		1.06	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Bismuth-214	**0.335**		0.106	0.111		0.0955	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Cesium-137	-0.000269	U	0.0610	0.0610		0.106	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Cobalt-60	0.0289	U	0.0510	0.0511		0.0601	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Europium-152	0.0418	U	0.0910	0.0911		0.170	pCi/g	08/24/21 16:40	09/16/21 12:13	1

Client Sample ID: FSS-052-081721

Date Collected: 08/17/21 10:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-9

Matrix: Solid

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0264	U	0.0471	0.0471		0.125	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Europium-155	-0.0572	U	0.137	0.137		0.328	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Lead-212	**0.535**		0.0894	0.112		0.0820	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Lead-214	**0.252**		0.0776	0.0817		0.0664	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Potassium-40	**2.23**		0.711	0.746		0.693	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Radium-226	**0.335**		0.106	0.111	0.200	0.0955	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Sodium-22	-0.0187	U	0.0580	0.0580		0.105	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Thorium-232	**0.655**		0.170	0.182		0.0847	pCi/g	08/24/21 16:40	09/16/21 12:13	1
Zinc-65	-0.00428	U	0.0473	0.0473		0.212	pCi/g	08/24/21 16:40	09/16/21 12:13	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.138*		*0.0427*	*0.0449*		*0.0348*	*pCi/g*	*08/24/21 16:40*	*09/16/21 12:13*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.321	U	0.846	0.846	5.00	1.51	pCi/g	09/08/21 16:09	09/17/21 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/08/21 16:09*	*09/17/21 15:14*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.616	U	1.17	1.17	5.00	2.11	pCi/g	08/31/21 14:29	09/15/21 19:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.4*		*30 - 110*	*08/31/21 14:29*	*09/15/21 19:32*	*1*

Client Sample ID: FSS-052-081721

Date Collected: 08/17/21 10:30
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-9

Matrix: Solid
Percent Solids: 91.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.86**		0.28	0.017	mg/Kg	☼	09/08/21 14:58	09/09/21 19:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	21	6.8	ug/Kg	☼	09/10/21 17:45	09/10/21 20:58	1

Client Sample ID: FSS-053-081721

Date Collected: 08/17/21 10:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-10

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.116	U	0.218	0.218	3.00	0.378	pCi/g	09/04/21 14:31	09/20/21 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*
Y Carrier	*89.7*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.00906	U	0.216	0.216	1.00	0.387	pCi/g	09/03/21 13:48	09/08/21 13:44	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.176	U	0.0464	0.0486	1.00	0.188	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.263	U	0.0546	0.0588	1.00	0.221	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.9*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0186	U	0.0299	0.0299	1.00	0.0513	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.187**		0.0782	0.0797	1.00	0.0255	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.0*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.455	U	0.724	0.725	5.00	1.24	pCi/g	09/16/21 08:54	09/17/21 23:49	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.353**		0.139	0.143		0.184	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Americium-241	0.0518	U	0.124	0.124		0.212	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Bismuth-212	-0.393	U	0.839	0.840		1.46	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Bismuth-214	**0.268**		0.105	0.108		0.0989	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Cesium-137	-0.0198	U	0.0449	0.0449		0.113	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Cobalt-60	-0.00869	U	0.102	0.102		0.0793	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Europium-152	0.00954	U	0.0196	0.0196		0.151	pCi/g	08/24/21 16:40	09/16/21 11:42	1

Client Sample ID: FSS-053-081721

Lab Sample ID: 160-43113-10

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0133	U	0.115	0.115		0.0929	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Europium-155	-0.0760	U	0.230	0.230		0.370	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Lead-212	**0.315**		0.0702	0.0772		0.0703	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Lead-214	**0.262**		0.0784	0.0826		0.104	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Potassium-40	**7.60**		1.35	1.54		0.628	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Radium-226	**0.268**		0.105	0.108	0.200	0.0989	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Sodium-22	-0.0112	U	0.0380	0.0380		0.0734	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Thorium-232	**0.353**		0.139	0.143		0.184	pCi/g	08/24/21 16:40	09/16/21 11:42	1
Zinc-65	-0.0384	U	0.161	0.161		0.290	pCi/g	08/24/21 16:40	09/16/21 11:42	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.138*		*0.0422*	*0.0444*		*0.0248*	*pCi/g*	*08/24/21 16:40*	*09/16/21 11:42*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.705	U	0.900	0.902	5.00	1.53	pCi/g	09/08/21 16:09	09/17/21 16:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*107*		*40 - 110*	*09/08/21 16:09*	*09/17/21 16:20*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.553	U	1.47	1.47	5.00	2.55	pCi/g	08/31/21 14:29	09/15/21 20:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.9*		*30 - 110*	*08/31/21 14:29*	*09/15/21 20:38*	*1*

Client Sample ID: FSS-053-081721

Lab Sample ID: 160-43113-10

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 98.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.96**		0.29	0.018	mg/Kg	☼	09/08/21 14:58	09/09/21 20:01	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.7	ug/Kg	☼	09/10/21 17:45	09/10/21 21:01	1

Client Sample ID: FSS-054-081721

Date Collected: 08/17/21 10:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-11

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.127	U	0.222	0.222	3.00	0.384	pCi/g	09/04/21 14:31	09/20/21 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.2*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.161	U	0.253	0.253	1.00	0.435	pCi/g	09/03/21 13:48	09/08/21 14:07	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00419	U	0.00580	0.00581	1.00	0.0469	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00419	U	0.00581	0.00582	1.00	0.0469	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*81.1*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00622	U	0.00862	0.00864	1.00	0.0697	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.190**		0.0853	0.0867	1.00	0.0299	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.2*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.454	U	0.706	0.708	5.00	1.21	pCi/g	09/16/21 08:54	09/18/21 00:11	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.367**		0.164	0.168		0.149	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Americium-241	-0.0414	U	0.0885	0.0886		0.230	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Bismuth-212	0.293	U	0.509	0.510		0.880	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Bismuth-214	**0.367**		0.0986	0.105		0.0978	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Cesium-137	0.0161	U	0.0398	0.0398		0.0704	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Cobalt-60	-0.00246	U	0.0407	0.0407		0.0508	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Europium-152	0.0260	U	0.0421	0.0422		0.152	pCi/g	08/24/21 16:40	09/16/21 13:10	1

Client Sample ID: FSS-054-081721

Lab Sample ID: 160-43113-11

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0441	U	0.0743	0.0745		0.0996	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Europium-155	-0.0697	U	0.131	0.131		0.393	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Lead-212	**0.313**		0.0659	0.0769		0.0706	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Lead-214	**0.414**		0.0827	0.0928		0.0998	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Potassium-40	**4.94**		0.894	1.02		0.597	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Radium-226	**0.367**		0.0986	0.105	0.200	0.0978	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Sodium-22	-0.0142	U	0.0430	0.0430		0.0780	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Thorium-232	**0.367**		0.164	0.168		0.149	pCi/g	08/24/21 16:40	09/16/21 13:10	1
Zinc-65	-0.0834	U	0.155	0.155		0.266	pCi/g	08/24/21 16:40	09/16/21 13:10	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.106*		*0.0412*	*0.0426*		*0.0417*	*pCi/g*	*08/24/21 16:40*	*09/16/21 13:10*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.16	U	0.875	0.883	5.00	1.45	pCi/g	09/08/21 16:09	09/17/21 17:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*09/08/21 16:09*	*09/17/21 17:26*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.367	U	1.23	1.23	5.00	2.23	pCi/g	08/31/21 14:29	09/15/21 21:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*81.1*		*30 - 110*	*08/31/21 14:29*	*09/15/21 21:44*	*1*

Client Sample ID: FSS-054-081721

Lab Sample ID: 160-43113-11

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 90.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.9**		0.22	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 20:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	17	U	22	7.0	ug/Kg	☼	09/10/21 17:45	09/10/21 21:13	1

Client Sample ID: FSS-055-081721

Date Collected: 08/17/21 10:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-12

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.565	U	0.369	0.371	3.00	0.579	pCi/g	09/04/21 14:31	09/20/21 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*40.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.178	U	0.242	0.243	1.00	0.412	pCi/g	09/03/21 13:48	09/08/21 14:29	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00454	0.00454	1.00	0.0278	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.000	U	0.00455	0.00455	1.00	0.0278	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*72.3*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0232	U	0.0322	0.0323	1.00	0.0348	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.219**		0.0897	0.0915	1.00	0.0522	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.5*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0322	U	0.688	0.688	5.00	1.23	pCi/g	09/16/21 08:54	09/18/21 00:34	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.386**		0.148	0.153		0.109	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Americium-241	-0.0534	U	0.141	0.142		0.243	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Bismuth-212	-0.0392	U	0.587	0.587		1.10	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Bismuth-214	**0.289**		0.0947	0.0990		0.0816	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Cesium-137	-0.0509	U	0.0475	0.0478		0.151	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Cobalt-60	-0.00895	U	0.0598	0.0598		0.0817	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Europium-152	0.105	U	0.137	0.137		0.115	pCi/g	08/24/21 16:40	09/17/21 13:14	1

Client Sample ID: FSS-055-081721

Lab Sample ID: 160-43113-12

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.00644	U	0.0434	0.0434		0.0887	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Europium-155	0.0422	U	0.0860	0.0862		0.223	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Lead-212	**0.250**		0.0677	0.0724		0.0769	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Lead-214	**0.166**		0.0789	0.0806		0.0903	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Potassium-40	**3.86**		0.996	1.07		0.648	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Radium-226	**0.289**		0.0947	0.0990	0.200	0.0816	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Sodium-22	0.000	U	0.0160	0.0160		0.0757	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Thorium-232	**0.386**		0.148	0.153		0.109	pCi/g	08/24/21 16:40	09/17/21 13:14	1
Zinc-65	0.000	U	0.0281	0.0281		0.286	pCi/g	08/24/21 16:40	09/17/21 13:14	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.109*		*0.0473*	*0.0485*		*0.0404*	*pCi/g*	*08/24/21 16:40*	*09/17/21 13:14*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.434	U	0.837	0.838	5.00	1.44	pCi/g	09/08/21 16:09	09/17/21 18:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*106*		*40 - 110*	*09/08/21 16:09*	*09/17/21 18:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.650	U	1.34	1.34	5.00	2.41	pCi/g	08/31/21 14:29	09/15/21 22:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*72.3*		*30 - 110*	*08/31/21 14:29*	*09/15/21 22:50*	*1*

Client Sample ID: FSS-055-081721

Lab Sample ID: 160-43113-12

Date Collected: 08/17/21 10:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 97.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.0**		0.22	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 20:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/10/21 17:45	09/10/21 21:26	1

Client Sample ID: FSS-056-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-13

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0382	U	0.166	0.166	3.00	0.299	pCi/g	09/04/21 14:31	09/20/21 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.6*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*
Y Carrier	*89.0*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0393	U	0.232	0.232	1.00	0.413	pCi/g	09/03/21 13:48	09/08/21 14:52	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00275	U	0.00540	0.00540	1.00	0.0533	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.000	U	0.00540	0.00540	1.00	0.0331	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*61.8*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00329	U	0.00645	0.00646	1.00	0.0637	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	**0.290**		0.110	0.112	1.00	0.0591	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.3*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.622	U	0.790	0.792	5.00	1.35	pCi/g	09/16/21 08:54	09/18/21 00:56	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.320**		0.135	0.139		0.117	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Americium-241	0.0438	U	0.0925	0.0926		0.122	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Bismuth-212	0.160	U	0.419	0.419		0.746	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Bismuth-214	**0.259**		0.0876	0.0915		0.0879	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Cesium-137	**0.128**		0.0342	0.0366		0.0175	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Cobalt-60	-0.00581	U	0.0392	0.0392		0.0481	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Europium-152	0.0445	U	0.147	0.147		0.255	pCi/g	08/24/21 16:40	09/16/21 13:55	1

Client Sample ID: FSS-056-081721

Lab Sample ID: 160-43113-13

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0138	U	0.0536	0.0536		0.0819	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Europium-155	-0.0722	U	0.174	0.174		0.393	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Lead-212	**0.344**		0.0603	0.0744		0.0486	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Lead-214	**0.259**		0.0778	0.0821		0.0744	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Potassium-40	**4.08**		0.797	0.896		0.565	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Radium-226	**0.259**		0.0876	0.0915	0.200	0.0879	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Sodium-22	0.00785	U	0.0382	0.0382		0.0465	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Thorium-232	**0.320**		0.135	0.139		0.117	pCi/g	08/24/21 16:40	09/16/21 13:55	1
Zinc-65	0.000	U	0.0166	0.0166		0.141	pCi/g	08/24/21 16:40	09/16/21 13:55	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.120*		*0.0406*	*0.0423*		*0.0385*	*pCi/g*	*08/24/21 16:40*	*09/16/21 13:55*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.15	U	0.881	0.888	5.00	1.47	pCi/g	09/08/21 16:09	09/17/21 19:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.5*		*40 - 110*	*09/08/21 16:09*	*09/17/21 19:38*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.285	U	1.62	1.62	5.00	2.81	pCi/g	08/31/21 14:29	09/15/21 23:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*61.8*		*30 - 110*	*08/31/21 14:29*	*09/15/21 23:56*	*1*

Client Sample ID: FSS-056-081721

Lab Sample ID: 160-43113-13

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 93.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**4.9**		0.25	0.015	mg/Kg	☼	09/08/21 14:58	09/09/21 20:46	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**58**		21	6.8	ug/Kg	☼	09/10/21 17:45	09/10/21 21:34	1

Client Sample ID: FSS-256-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-14

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.189	U	0.206	0.206	3.00	0.345	pCi/g	09/04/21 14:31	09/20/21 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.6*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*
Y Carrier	*89.7*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:51*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.170	U	0.250	0.250	1.00	0.424	pCi/g	09/03/21 13:48	09/08/21 15:15	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00272	U	0.0233	0.0233	1.00	0.0673	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.0272	U	0.0378	0.0378	1.00	0.0610	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.4*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0251	U	0.0404	0.0405	1.00	0.0695	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.199**		0.0962	0.0976	1.00	0.0712	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*63.8*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.541	U	0.539	0.542	5.00	0.957	pCi/g	09/17/21 06:21	09/18/21 03:54	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.195	U	0.0971	0.0990		0.237	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Americium-241	0.0483	U	0.103	0.103		0.176	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Bismuth-212	0.211	U	0.436	0.436		0.765	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Bismuth-214	**0.274**		0.0847	0.0892		0.0854	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Cesium-137	**0.102**		0.0309	0.0326		0.0179	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Cobalt-60	-0.0119	U	0.0567	0.0567		0.0657	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Europium-152	0.0360	U	0.0572	0.0574		0.137	pCi/g	08/24/21 16:40	09/16/21 14:06	1

Client Sample ID: FSS-256-081721

Lab Sample ID: 160-43113-14

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0407	U	0.0517	0.0519		0.0955	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Europium-155	-0.0782	U	0.232	0.232		0.395	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Lead-212	**0.336**		0.0635	0.0765		0.0611	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Lead-214	**0.267**		0.0675	0.0728		0.0866	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Potassium-40	**4.07**		0.750	0.854		0.265	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Radium-226	**0.274**		0.0847	0.0892	0.200	0.0854	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Sodium-22	-0.0345	U	0.0448	0.0449		0.0756	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Thorium-232	0.195	U	0.0971	0.0990		0.237	pCi/g	08/24/21 16:40	09/16/21 14:06	1
Zinc-65	0.00306	U	0.0986	0.0986		0.182	pCi/g	08/24/21 16:40	09/16/21 14:06	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.141*		*0.0444*	*0.0466*		*0.0312*	*pCi/g*	*08/24/21 16:40*	*09/16/21 14:06*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.328	U	0.893	0.894	5.00	1.57	pCi/g	09/08/21 16:09	09/17/21 21:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/08/21 16:09*	*09/17/21 21:51*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.82	U	1.68	1.68	5.00	2.81	pCi/g	08/31/21 14:29	09/16/21 01:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.4*		*30 - 110*	*08/31/21 14:29*	*09/16/21 01:03*	*1*

Client Sample ID: FSS-256-081721

Lab Sample ID: 160-43113-14

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 91.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.1**		0.22	0.013	mg/Kg	☼	09/08/21 14:58	09/09/21 20:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**54**		19	6.3	ug/Kg	☼	09/10/21 17:45	09/10/21 21:36	1

Client Sample ID: FSS-057-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-15

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.360**		0.214	0.216	3.00	0.333	pCi/g	09/04/21 14:31	09/20/21 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.8*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*
Y Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0449	U	0.226	0.226	1.00	0.398	pCi/g	09/03/21 13:48	09/08/21 15:37	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00778	U	0.0209	0.0210	1.00	0.0502	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.00778	U	0.0210	0.0210	1.00	0.0502	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.1*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0549**		0.0538	0.0540	1.00	0.0412	pCi/g	08/31/21 14:27	09/10/21 13:43	1
Uranium-238	**0.176**		0.0896	0.0908	1.00	0.0735	pCi/g	08/31/21 14:27	09/10/21 13:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*64.0*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:43*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.680	U	0.571	0.575	5.00	1.03	pCi/g	09/17/21 06:21	09/18/21 04:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.355**		0.145	0.149		0.114	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Americium-241	0.0598	U	0.143	0.143		0.245	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Bismuth-212	0.0489	U	0.658	0.658		1.23	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Bismuth-214	**0.295**		0.107	0.111		0.108	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Cesium-137	**0.256**		0.0770	0.0812		0.0858	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Cobalt-60	-0.0488	U	0.0339	0.0342		0.113	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Europium-152	0.0898	U	0.186	0.187		0.162	pCi/g	08/24/21 16:40	09/16/21 14:56	1

Client Sample ID: FSS-057-081721

Lab Sample ID: 160-43113-15

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0291	U	0.0649	0.0649		0.112	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Europium-155	0.0301	U	0.0847	0.0847		0.297	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Lead-212	**0.325**		0.0739	0.0810		0.0743	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Lead-214	**0.383**		0.0872	0.0951		0.151	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Potassium-40	**3.32**		0.950	1.01		0.674	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Radium-226	**0.295**		0.107	0.111	0.200	0.108	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Sodium-22	0.0120	U	0.0407	0.0407		0.0787	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Thorium-232	**0.355**		0.145	0.149		0.114	pCi/g	08/24/21 16:40	09/16/21 14:56	1
Zinc-65	0.000	U	0.0292	0.0292		0.284	pCi/g	08/24/21 16:40	09/16/21 14:56	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/24/21 16:40*	*09/16/21 14:56*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.863	U	0.880	0.884	5.00	1.48	pCi/g	09/08/21 16:09	09/17/21 22:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*96.5*		*40 - 110*	*09/08/21 16:09*	*09/17/21 22:57*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.79	U	1.67	1.67	5.00	2.81	pCi/g	08/31/21 14:29	09/16/21 02:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.1*		*30 - 110*	*08/31/21 14:29*	*09/16/21 02:09*	*1*

Client Sample ID: FSS-057-081721

Lab Sample ID: 160-43113-15

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.1**		0.29	0.018	mg/Kg	☼	09/08/21 14:58	09/09/21 20:53	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**34**		19	6.0	ug/Kg	☼	09/10/21 17:45	09/10/21 21:39	1

Client Sample ID: FSS-257-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-16

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.100	U	0.198	0.198	3.00	0.343	pCi/g	09/04/21 14:31	09/20/21 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.0*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*
Y Carrier	*91.2*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0564	U	0.219	0.220	1.00	0.383	pCi/g	09/03/21 13:48	09/08/21 16:00	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0217	U	0.0383	0.0384	1.00	0.0724	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00271	U	0.00532	0.00532	1.00	0.0525	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.0*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00694	U	0.00962	0.00964	1.00	0.0778	pCi/g	08/31/21 14:27	09/10/21 13:43	1
Uranium-238	**0.239**		0.103	0.105	1.00	0.0624	pCi/g	08/31/21 14:27	09/10/21 13:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*58.9*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:43*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.118	U	0.531	0.532	5.00	0.907	pCi/g	09/17/21 06:21	09/18/21 05:01	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.128	U	0.167	0.168		0.270	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Americium-241	-0.0587	U	0.0173	0.0183		0.213	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Bismuth-212	-0.0154	U	0.540	0.540		0.988	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Bismuth-214	0.0191	U	0.0913	0.0913		0.213	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Cesium-137	**0.156**		0.0446	0.0473		0.0302	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Cobalt-60	0.00125	U	0.0412	0.0412		0.0517	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Europium-152	0.0589	U	0.105	0.105		0.125	pCi/g	08/24/21 16:40	09/16/21 14:52	1

Client Sample ID: FSS-257-081721

Lab Sample ID: 160-43113-16

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0215	U	0.0359	0.0360		0.0747	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Europium-155	0.0473	U	0.116	0.116		0.323	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Lead-212	**0.321**		0.0697	0.0807		0.0791	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Lead-214	**0.294**		0.0716	0.0776		0.0630	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Potassium-40	**3.62**		0.789	0.868		0.607	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Radium-226	0.0191	U	0.0913	0.0913	0.200	0.213	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Sodium-22	0.00482	U	0.0252	0.0252		0.0499	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Thorium-232	0.128	U	0.167	0.168		0.270	pCi/g	08/24/21 16:40	09/16/21 14:52	1
Zinc-65	0.000	U	0.0178	0.0178		0.204	pCi/g	08/24/21 16:40	09/16/21 14:52	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/24/21 16:40*	*09/16/21 14:52*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.611	U	0.853	0.855	5.00	1.44	pCi/g	09/08/21 16:09	09/18/21 00:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*95.1*		*40 - 110*	*09/08/21 16:09*	*09/18/21 00:03*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.000	U	1.56	1.56	5.00	2.74	pCi/g	08/31/21 14:29	09/15/21 14:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.0*		*30 - 110*	*08/31/21 14:29*	*09/15/21 14:00*	*1*

Client Sample ID: FSS-257-081721

Lab Sample ID: 160-43113-16

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 95.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.7**		0.25	0.015	mg/Kg	☼	09/08/21 14:58	09/09/21 20:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**25**		18	6.0	ug/Kg	☼	09/10/21 17:45	09/10/21 21:41	1

Client Sample ID: FSS-058-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-17

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.206	U	0.198	0.198	3.00	0.327	pCi/g	09/04/21 14:31	09/20/21 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.8*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*
Y Carrier	*84.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.124	U	0.234	0.234	1.00	0.401	pCi/g	09/03/21 13:48	09/08/21 16:23	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00615	U	0.00852	0.00854	1.00	0.0689	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00308	U	0.0277	0.0277	1.00	0.0876	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.0*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00350	U	0.00687	0.00688	1.00	0.0678	pCi/g	08/31/21 14:27	09/10/21 13:43	1
Uranium-238	**0.259**		0.109	0.111	1.00	0.0751	pCi/g	08/31/21 14:27	09/10/21 13:43	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*55.0*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:43*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.446	U	0.535	0.537	5.00	0.945	pCi/g	09/17/21 06:21	09/18/21 05:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.127**		0.0642	0.0654		0.0663	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Americium-241	-0.0227	U	0.114	0.114		0.198	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Bismuth-212	0.232	U	0.359	0.360		0.619	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Bismuth-214	**0.197**		0.0784	0.0809		0.0858	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Cesium-137	**0.117**		0.0443	0.0459		0.0381	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Cobalt-60	0.0117	U	0.0405	0.0405		0.0486	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Europium-152	0.0127	U	0.0182	0.0182		0.129	pCi/g	08/24/21 16:40	09/16/21 14:53	1

Client Sample ID: FSS-058-081721

Lab Sample ID: 160-43113-17

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	**0.103**		0.0429	0.0442		0.0932	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Europium-155	0.00632	U	0.0162	0.0162		0.378	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Lead-212	**0.418**		0.0948	0.109		0.129	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Lead-214	**0.249**		0.0673	0.0719		0.123	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Potassium-40	**2.06**		0.671	0.702		0.501	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Radium-226	**0.197**		0.0784	0.0809	0.200	0.0858	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Sodium-22	0.00453	U	0.0237	0.0237		0.0469	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Thorium-232	**0.127**		0.0642	0.0654		0.0663	pCi/g	08/24/21 16:40	09/16/21 14:53	1
Zinc-65	0.00000000576	U	0.0946	0.0946		0.175	pCi/g	08/24/21 16:40	09/16/21 14:53	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.145*		*0.0444*	*0.0468*		*0.0307*	*pCi/g*	*08/24/21 16:40*	*09/16/21 14:53*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.740	U	0.802	0.806	5.00	1.35	pCi/g	09/08/21 16:09	09/18/21 01:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*09/08/21 16:09*	*09/18/21 01:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.30	U	1.94	1.94	5.00	3.30	pCi/g	08/31/21 14:29	09/16/21 04:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.0*		*30 - 110*	*08/31/21 14:29*	*09/16/21 04:21*	*1*

Client Sample ID: FSS-058-081721

Lab Sample ID: 160-43113-17

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 96.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.4**		0.24	0.015	mg/Kg	☼	09/08/21 14:58	09/09/21 21:00	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**6.0**	**J**	18	5.9	ug/Kg	☼	09/10/21 17:45	09/10/21 21:44	1

Client Sample ID: FSS-258-081721

Date Collected: 08/17/21 08:00
Date Received: 08/18/21 13:02

Lab Sample ID: 160-43113-18

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.555**		0.245	0.249	3.00	0.361	pCi/g	09/04/21 14:31	09/20/21 14:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.7*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*
Y Carrier	*84.5*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:53*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.186	U	0.259	0.259	1.00	0.434	pCi/g	09/03/21 13:48	09/08/21 16:45	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0180	U	0.0507	0.0507	1.00	0.106	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.0391	U	0.0483	0.0484	1.00	0.0745	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*55.8*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0323	U	0.0448	0.0448	1.00	0.0724	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	0.0466	U	0.0513	0.0514	1.00	0.0778	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*66.1*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.170	U	0.383	0.383	5.00	0.629	pCi/g	09/17/21 06:21	09/18/21 06:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	**0.533**		0.112	0.124		0.0903	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Americium-241	0.0606	U	0.150	0.150		0.257	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Bismuth-212	-0.0464	U	0.851	0.851		1.53	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Bismuth-214	**0.354**		0.105	0.111		0.0954	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Cesium-137	**0.232**		0.0619	0.0663		0.0404	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Cobalt-60	-0.0270	U	0.0727	0.0728		0.0853	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Europium-152	0.0167	U	0.0220	0.0221		0.207	pCi/g	08/24/21 16:40	09/16/21 14:54	1

Client Sample ID: FSS-258-081721

Lab Sample ID: 160-43113-18

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	-0.0293	U	0.0752	0.0752		0.130	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Europium-155	-0.0963	U	0.129	0.129		0.469	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Lead-212	**0.394**		0.0790	0.0935		0.0728	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Lead-214	**0.344**		0.0943	0.101		0.0708	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Potassium-40	**2.71**		0.798	0.843		0.739	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Radium-226	**0.354**		0.105	0.111	0.200	0.0954	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Sodium-22	0.000	U	0.00901	0.00901		0.0339	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Thorium-232	**0.533**		0.112	0.124		0.0903	pCi/g	08/24/21 16:40	09/16/21 14:54	1
Zinc-65	0.0446	U	0.104	0.104		0.185	pCi/g	08/24/21 16:40	09/16/21 14:54	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Tl-208	*0.169*		*0.0574*	*0.0600*		*0.0545*	*pCi/g*	*08/24/21 16:40*	*09/16/21 14:54*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.290	U	0.866	0.867	5.00	1.50	pCi/g	09/08/21 16:09	09/18/21 02:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*103*		*40 - 110*	*09/08/21 16:09*	*09/18/21 02:16*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.79	U	1.91	1.91	5.00	3.21	pCi/g	08/31/21 14:29	09/16/21 05:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*55.8*		*30 - 110*	*08/31/21 14:29*	*09/16/21 05:28*	*1*

Client Sample ID: FSS-258-081721

Lab Sample ID: 160-43113-18

Date Collected: 08/17/21 08:00

Matrix: Solid

Date Received: 08/18/21 13:02

Percent Solids: 81.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.6**		0.27	0.016	mg/Kg	☼	09/08/21 14:58	09/09/21 21:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	17	U	22	7.1	ug/Kg	☼	09/10/21 17:45	09/10/21 21:46	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-548897/1-A
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548897

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/08/21 14:58	09/09/21 19:15	1

Lab Sample ID: LCS 280-548897/2-A
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.3		mg/Kg		92	84 - 118

Lab Sample ID: 160-43113-10 MS
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-053-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.96		13.6	13.2		mg/Kg	☼	90	84 - 118

Lab Sample ID: 160-43113-10 MSD
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-053-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.96		14.5	14.2		mg/Kg	☼	91	84 - 118	7	20

Lab Sample ID: 160-43113-11 MS
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-054-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.9		15.4	16.5		mg/Kg	☼	95	84 - 118

Lab Sample ID: 160-43113-11 MSD
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-054-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.9		17.1	17.7		mg/Kg	☼	92	84 - 118	7	20

Lab Sample ID: 160-43113-12 MS
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-055-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3.0		16.5	19.7		mg/Kg	☼	102	84 - 118

Lab Sample ID: 160-43113-12 MSD
Matrix: Solid
Analysis Batch: 549405

Client Sample ID: FSS-055-081721
Prep Type: Total/NA
Prep Batch: 548897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.0		13.8	16.8		mg/Kg	☼	100	84 - 118	16	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-549136/1-A
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549136

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/10/21 17:45	09/10/21 20:25	1

Lab Sample ID: LCS 280-549136/2-A
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	346		ug/Kg		104	80 - 124

Lab Sample ID: LCSD 280-549136/3-A
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	347		ug/Kg		104	80 - 124	0	20

Lab Sample ID: 160-43113-10 MS
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-053-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	356	375		ug/Kg	☼	105	80 - 124

Lab Sample ID: 160-43113-10 MSD
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-053-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	369	390		ug/Kg	☼	106	80 - 124	4	20

Lab Sample ID: 160-43113-11 MS
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-054-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	17	U	387	407		ug/Kg	☼	105	80 - 124

Lab Sample ID: 160-43113-11 MSD
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-054-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	17	U	409	429		ug/Kg	☼	105	80 - 124	5	20

Lab Sample ID: 160-43113-12 MS
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-055-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	366	378		ug/Kg	☼	103	80 - 124

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43113-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: 160-43113-12 MSD
Matrix: Solid
Analysis Batch: 549555

Client Sample ID: FSS-055-081721
Prep Type: Total/NA
Prep Batch: 549136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	394	408		ug/Kg	☼	103	80 - 124	8	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-525601/1-A
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525601

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.03829	U	0.174	0.174	3.00	0.312	pCi/g	09/04/21 14:31	09/20/21 14:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.1*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*
Y Carrier	*89.3*		*40 - 110*	*09/04/21 14:31*	*09/20/21 14:45*	*1*

Lab Sample ID: LCS 160-525601/2-A
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525601

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.62	7.387		0.781	3.00	0.284	pCi/g	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.8*		*40 - 110*
Y Carrier	*90.5*		*40 - 110*

Lab Sample ID: 160-43084-D-26-H DU
Matrix: Solid
Analysis Batch: 527824

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525601

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0893	U		-0.00732 0	U	0.203	3.00	0.370	pCi/g			0.67	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*81.7*		*40 - 110*
Y Carrier	*91.6*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-525456/1-A
Matrix: Solid
Analysis Batch: 526101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525456

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.2595	U	0.240	0.241	1.00	0.391	pCi/g	09/03/21 13:48	09/08/21 09:35	1

Lab Sample ID: LCS 160-525456/2-A
Matrix: Solid
Analysis Batch: 526101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525456

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.62	7.767		0.906	1.00	0.397	pCi/g	102	79 - 125		

Lab Sample ID: 160-43113-17 MS
Matrix: Solid
Analysis Batch: 526101

Client Sample ID: FSS-058-081721
Prep Type: Total/NA
Prep Batch: 525456

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.124	U	7.55	7.081		0.841	1.00	0.387	pCi/g	92	78 - 122		

Lab Sample ID: 160-43113-18 DU
Matrix: Solid
Analysis Batch: 526101

Client Sample ID: FSS-258-081721
Prep Type: Total/NA
Prep Batch: 525456

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.186	U		-0.02388	U	0.249	1.00	0.459	pCi/g			1.14	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-524626/1-A
Matrix: Solid
Analysis Batch: 525927

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524626

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.02857	U	0.0187	0.0188	1.00	0.108	pCi/g	08/29/21 20:35	09/08/21 13:49	1
Uranium-238	-0.005091	U	0.00706	0.00707	1.00	0.0570	pCi/g	08/29/21 20:35	09/08/21 13:49	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*68.5*		*30 - 110*	*08/29/21 20:35*	*09/08/21 13:49*	*1*

Lab Sample ID: LCS 160-524626/2-A
Matrix: Solid
Analysis Batch: 525929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524626

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.892		0.784	1.00	0.0826	pCi/g	108	76 - 117		
Uranium-238			6.51	6.673		0.764	1.00	0.0781	pCi/g	102	78 - 118		

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Tracer	LCS %Yield	LCS Qualifier	Limits
Uranium-232	64.9		30 - 110

Lab Sample ID: 160-43079-A-2-L DU
Matrix: Solid
Analysis Batch: 525931

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524626

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-235	-0.00468	U		0.0000	U	0.00615	1.00	0.0377	pCi/g			0.83	3
Uranium-238	0.113			0.1359		0.0750	1.00	0.0564	pCi/g			0.39	3

Tracer	DU %Yield	DU Qualifier	Limits
Uranium-232	62.2		30 - 110

Lab Sample ID: MB 160-524999/1-A
Matrix: Solid
Analysis Batch: 526333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524999

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.007594	U	0.0205	0.0205	1.00	0.0490	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	-0.002030	U	0.0182	0.0182	1.00	0.0578	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	102		30 - 110	08/31/21 14:27	09/10/21 13:45	1

Lab Sample ID: LCS 160-524999/2-A
Matrix: Solid
Analysis Batch: 526334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524999

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	5.631		0.629	1.00	0.0627	pCi/g	88	76 - 117		
Uranium-238			6.51	6.623		0.714	1.00	0.0593	pCi/g	102	78 - 118		

Tracer	LCS %Yield	LCS Qualifier	Limits
Uranium-232	95.0		30 - 110

Lab Sample ID: 160-43124-D-6-L DU
Matrix: Solid
Analysis Batch: 526361

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524999

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-235	-0.00297	U		0.01964	U	0.0375	1.00	0.0734	pCi/g			1.17	3
Uranium-238	0.248			0.1549		0.0809	1.00	0.0508	pCi/g			1.44	3

Tracer	DU %Yield	DU Qualifier	Limits
Uranium-232	66.2		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-524624/1-A
Matrix: Solid
Analysis Batch: 526121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524624

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.002427	U	0.00476	0.00476	1.00	0.0470	pCi/g	08/29/21 18:19	09/09/21 21:38	1
Plutonium-239/240	0.0000	U	0.00476	0.00476	1.00	0.0291	pCi/g	08/29/21 18:19	09/09/21 21:38	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.8*		*30 - 110*	*08/29/21 18:19*	*09/09/21 21:38*	*1*

Lab Sample ID: LCS 160-524624/2-A
Matrix: Solid
Analysis Batch: 526122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524624

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.825		0.756	1.00	0.273	pCi/g	112	80 - 125		
Plutonium-239/240			5.28	5.892		0.768	1.00	0.322	pCi/g	112	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*50.4*		*30 - 110*

Lab Sample ID: 160-43079-A-2-H DU
Matrix: Solid
Analysis Batch: 526124

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524624

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.00720	U		0.0000	U	0.00503	1.00	0.0308	pCi/g			1.26	3
Plutonium-239/240	0.00721	U		0.0000	U	0.00503	1.00	0.0308	pCi/g			0.46	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*62.9*		*30 - 110*

Lab Sample ID: MB 160-524992/1-A
Matrix: Solid
Analysis Batch: 526299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524992

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.004118	U	0.00571	0.00572	1.00	0.0461	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.008245	U	0.00808	0.00811	1.00	0.0551	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-524992/2-A
Matrix: Solid
Analysis Batch: 526300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524992

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.19	5.059		0.571	1.00	0.0555	pCi/g	97	80 - 125
Plutonium-239/240	5.28	5.285		0.590	1.00	0.0235	pCi/g	100	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.1*		*30 - 110*

Lab Sample ID: 160-43124-D-6-F DU
Matrix: Solid
Analysis Batch: 526296

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524992

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Plutonium-238	0.0175	U	0.007388	U	0.0199	1.00	0.0477	pCi/g	0.48	3
Plutonium-239/240	-0.00219	U	-0.00493	U	0.00684	1.00	0.0552	pCi/g	0.66	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*79.8*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-527261/1-A
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527261

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.3198	U	0.746	0.747	5.00	1.37	pCi/g	09/16/21 08:54	09/17/21 18:54	1

Lab Sample ID: LCS 160-527261/2-A
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527261

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	84.4	82.32		9.23	5.00	1.37	pCi/g	98	75 - 125

Lab Sample ID: 160-43124-C-1-D MS
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 527261

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	-0.0223	U	77.4	77.58		8.68	5.00	1.26	pCi/g	100	29 - 128

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43124-C-1-C DU
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527261

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0223	U		0.3708	U	0.611	5.00	1.04	pCi/g			0.88	3

Lab Sample ID: MB 160-527451/1-A
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527451

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.3874	U	0.612	0.614	5.00	1.07	pCi/g	09/17/21 06:21	09/17/21 22:19	1

Lab Sample ID: LCS 160-527451/2-A
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527451

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	81.63		8.99	5.00	1.06	pCi/g	97	75 - 125		

Lab Sample ID: 160-43113-1 MS
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: FSS-044-081721
Prep Type: Total/NA
Prep Batch: 527451

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.191	U	78.8	79.23		8.72	5.00	0.995	pCi/g	100	29 - 128		

Lab Sample ID: 160-43113-1 DU
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: FSS-044-081721
Prep Type: Total/NA
Prep Batch: 527451

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.191	U		-0.6189	U	0.454	5.00	0.818	pCi/g			1.31	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-523941/1-A
Matrix: Solid
Analysis Batch: 527258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523941

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.07395	U	0.131	0.131		0.157	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Americium-241	-0.04487	U	0.0995	0.0996		0.172	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Bismuth-212	0.0000	U	0.0759	0.0759		0.616	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Bismuth-214	0.08958	U	0.0664	0.0670		0.110	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Cesium-137	-0.02273	U	0.0431	0.0432		0.0755	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Cobalt-60	-0.02502	U	0.0756	0.0757		0.0863	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Europium-152	0.09588	U	0.0703	0.0710		0.267	pCi/g	08/24/21 16:40	09/16/21 15:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-523941/1-A
Matrix: Solid
Analysis Batch: 527258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523941

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.1057		0.0488	0.0500		0.0880	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Europium-155	0.01861	U	0.0625	0.0625		0.275	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Lead-212	0.01478	U	0.0608	0.0609		0.108	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Lead-214	-0.002601	U	0.0847	0.0847		0.153	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Potassium-40	0.09465	U	0.564	0.564		0.668	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Radium-226	0.08958	U	0.0664	0.0670	0.200	0.110	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Sodium-22	0.02264	U	0.0198	0.0200		0.0334	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Thorium-232	0.07395	U	0.131	0.131		0.157	pCi/g	08/24/21 16:40	09/16/21 15:27	1
Zinc-65	0.0000	U	0.0446	0.0446		0.152	pCi/g	08/24/21 16:40	09/16/21 15:27	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*08/24/21 16:40*	*09/16/21 15:27*	*1*

Lab Sample ID: LCS 160-523941/2-A
Matrix: Solid
Analysis Batch: 527252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523941

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	95.05		9.79		1.13	pCi/g	99	87 - 116
Cesium-137	26.3	25.75		2.70		0.176	pCi/g	98	87 - 120
Cobalt-60	8.57	8.493		0.885		0.0976	pCi/g	99	87 - 115

Lab Sample ID: 160-43113-18 DU
Matrix: Solid
Analysis Batch: 527260

Client Sample ID: FSS-258-081721
Prep Type: Total/NA
Prep Batch: 523941

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium-228	0.533		0.4885		0.144		0.121	pCi/g	0.46	2
Americium-241	0.0606	U	-0.06372	U	0.168		0.288	pCi/g	1.08	2
Bismuth-212	-0.0464	U	-0.01739	U	0.824		1.52	pCi/g	0.05	2
Bismuth-214	0.354		0.3352		0.110		0.0905	pCi/g	0.23	2
Cesium-137	0.232		0.2839		0.0929		0.106	pCi/g	0.89	2
Cobalt-60	-0.0270	U	-0.00120 4	U	0.00229		0.120	pCi/g	0.69	2
Europium-152	0.0167	U	-0.03015	U	0.0441		0.462	pCi/g	1.86	2
Europium-154	-0.0293	U	0.006337	U	0.0167		0.142	pCi/g	0.91	2
Europium-155	-0.0963	U	0.06537	U	0.143		0.245	pCi/g	1.65	2
Lead-212	0.394		0.5126		0.104		0.0738	pCi/g	1.66	2
Lead-214	0.344		0.3761		0.0970		0.0921	pCi/g	0.45	2
Potassium-40	2.71		3.059		0.997		0.718	pCi/g	0.53	2
Radium-226	0.354		0.3352		0.110	0.200	0.0905	pCi/g	0.23	2
Sodium-22	0.000	U	0.03834	U	0.0309		0.0471	pCi/g	2.33	2
Thorium-232	0.533		0.4885		0.144		0.121	pCi/g	0.46	2
Zinc-65	0.0446	U	0.0000	U	0.0220		0.317	pCi/g	0.82	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Other Detected Radionuclides	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tl-208	0.169			0.1808		0.0547		0.0283	pCi/g			0.28	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-526025/1-A
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526025

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.180	U	0.883	0.891	5.00	1.48	pCi/g	09/08/21 16:09	09/17/21 01:59	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	115	Q	40 - 110	09/08/21 16:09	09/17/21 01:59	1

Lab Sample ID: LCS 160-526025/2-A
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526025

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			19.1	18.81		2.41	5.00	1.45	pCi/g	99	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni	103		40 - 110

Lab Sample ID: 160-43113-13 DU
Matrix: Solid
Analysis Batch: 527590

Client Sample ID: FSS-056-081721
Prep Type: Total/NA
Prep Batch: 526025

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.15	U		0.7118	U	0.815	5.00	1.36	pCi/g			0.72	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni	102		40 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-524625/1-A
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524625

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.9155	U	1.61	1.61	5.00	2.91	pCi/g	08/29/21 20:28	09/15/21 13:31	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	73.8		30 - 110	08/29/21 20:28	09/15/21 13:31	1

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: LCS 160-524625/2-A
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524625

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	21.72		3.67	5.00	3.85	pCi/g	109	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*50.4*		*30 - 110*

Lab Sample ID: 160-43079-A-2-J DU
Matrix: Solid
Analysis Batch: 527450

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524625

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-1.80	U		-1.278	U	1.64	5.00	2.93	pCi/g			0.37	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*62.9*		*30 - 110*

Lab Sample ID: MB 160-525000/1-A
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525000

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.2839	U	1.08	1.08	5.00	1.94	pCi/g	08/31/21 14:29	09/15/21 12:54	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*08/31/21 14:29*	*09/15/21 12:54*	*1*

Lab Sample ID: LCS 160-525000/2-A
Matrix: Solid
Analysis Batch: 527690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525000

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	19.34		2.53	5.00	1.96	pCi/g	97	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.1*		*30 - 110*

Lab Sample ID: 160-43124-D-6-J DU
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525000

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.385	U		-0.1104	U	1.31	5.00	2.34	pCi/g			0.32	3

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: 160-43124-D-6-J DU
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525000

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	79.8		30 - 110

Metals

Prep Batch: 548897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	3050B	
160-43113-2	FSS-045-081721	Total/NA	Solid	3050B	
160-43113-3	FSS-046-081721	Total/NA	Solid	3050B	
160-43113-4	FSS-047-081721	Total/NA	Solid	3050B	
160-43113-5	FSS-048-081721	Total/NA	Solid	3050B	
160-43113-6	FSS-049-081721	Total/NA	Solid	3050B	
160-43113-7	FSS-050-081721	Total/NA	Solid	3050B	
160-43113-8	FSS-051-081721	Total/NA	Solid	3050B	
160-43113-9	FSS-052-081721	Total/NA	Solid	3050B	
160-43113-10	FSS-053-081721	Total/NA	Solid	3050B	
160-43113-11	FSS-054-081721	Total/NA	Solid	3050B	
160-43113-12	FSS-055-081721	Total/NA	Solid	3050B	
160-43113-13	FSS-056-081721	Total/NA	Solid	3050B	
160-43113-14	FSS-256-081721	Total/NA	Solid	3050B	
160-43113-15	FSS-057-081721	Total/NA	Solid	3050B	
160-43113-16	FSS-257-081721	Total/NA	Solid	3050B	
160-43113-17	FSS-058-081721	Total/NA	Solid	3050B	
160-43113-18	FSS-258-081721	Total/NA	Solid	3050B	
MB 280-548897/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548897/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43113-10 MS	FSS-053-081721	Total/NA	Solid	3050B	
160-43113-10 MSD	FSS-053-081721	Total/NA	Solid	3050B	
160-43113-11 MS	FSS-054-081721	Total/NA	Solid	3050B	
160-43113-11 MSD	FSS-054-081721	Total/NA	Solid	3050B	
160-43113-12 MS	FSS-055-081721	Total/NA	Solid	3050B	
160-43113-12 MSD	FSS-055-081721	Total/NA	Solid	3050B	

Prep Batch: 549136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	7471B	
160-43113-2	FSS-045-081721	Total/NA	Solid	7471B	
160-43113-3	FSS-046-081721	Total/NA	Solid	7471B	
160-43113-4	FSS-047-081721	Total/NA	Solid	7471B	
160-43113-5	FSS-048-081721	Total/NA	Solid	7471B	
160-43113-6	FSS-049-081721	Total/NA	Solid	7471B	
160-43113-7	FSS-050-081721	Total/NA	Solid	7471B	
160-43113-8	FSS-051-081721	Total/NA	Solid	7471B	
160-43113-9	FSS-052-081721	Total/NA	Solid	7471B	
160-43113-10	FSS-053-081721	Total/NA	Solid	7471B	
160-43113-11	FSS-054-081721	Total/NA	Solid	7471B	
160-43113-12	FSS-055-081721	Total/NA	Solid	7471B	
160-43113-13	FSS-056-081721	Total/NA	Solid	7471B	
160-43113-14	FSS-256-081721	Total/NA	Solid	7471B	
160-43113-15	FSS-057-081721	Total/NA	Solid	7471B	
160-43113-16	FSS-257-081721	Total/NA	Solid	7471B	
160-43113-17	FSS-058-081721	Total/NA	Solid	7471B	
160-43113-18	FSS-258-081721	Total/NA	Solid	7471B	
MB 280-549136/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549136/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549136/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43113-10 MS	FSS-053-081721	Total/NA	Solid	7471B	

Metals (Continued)

Prep Batch: 549136 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-10 MSD	FSS-053-081721	Total/NA	Solid	7471B	
160-43113-11 MS	FSS-054-081721	Total/NA	Solid	7471B	
160-43113-11 MSD	FSS-054-081721	Total/NA	Solid	7471B	
160-43113-12 MS	FSS-055-081721	Total/NA	Solid	7471B	
160-43113-12 MSD	FSS-055-081721	Total/NA	Solid	7471B	

Analysis Batch: 549405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	6020B	548897
160-43113-2	FSS-045-081721	Total/NA	Solid	6020B	548897
160-43113-3	FSS-046-081721	Total/NA	Solid	6020B	548897
160-43113-4	FSS-047-081721	Total/NA	Solid	6020B	548897
160-43113-5	FSS-048-081721	Total/NA	Solid	6020B	548897
160-43113-6	FSS-049-081721	Total/NA	Solid	6020B	548897
160-43113-7	FSS-050-081721	Total/NA	Solid	6020B	548897
160-43113-8	FSS-051-081721	Total/NA	Solid	6020B	548897
160-43113-9	FSS-052-081721	Total/NA	Solid	6020B	548897
160-43113-10	FSS-053-081721	Total/NA	Solid	6020B	548897
160-43113-11	FSS-054-081721	Total/NA	Solid	6020B	548897
160-43113-12	FSS-055-081721	Total/NA	Solid	6020B	548897
160-43113-13	FSS-056-081721	Total/NA	Solid	6020B	548897
160-43113-14	FSS-256-081721	Total/NA	Solid	6020B	548897
160-43113-15	FSS-057-081721	Total/NA	Solid	6020B	548897
160-43113-16	FSS-257-081721	Total/NA	Solid	6020B	548897
160-43113-17	FSS-058-081721	Total/NA	Solid	6020B	548897
160-43113-18	FSS-258-081721	Total/NA	Solid	6020B	548897
MB 280-548897/1-A	Method Blank	Total/NA	Solid	6020B	548897
LCS 280-548897/2-A	Lab Control Sample	Total/NA	Solid	6020B	548897
160-43113-10 MS	FSS-053-081721	Total/NA	Solid	6020B	548897
160-43113-10 MSD	FSS-053-081721	Total/NA	Solid	6020B	548897
160-43113-11 MS	FSS-054-081721	Total/NA	Solid	6020B	548897
160-43113-11 MSD	FSS-054-081721	Total/NA	Solid	6020B	548897
160-43113-12 MS	FSS-055-081721	Total/NA	Solid	6020B	548897
160-43113-12 MSD	FSS-055-081721	Total/NA	Solid	6020B	548897

Analysis Batch: 549555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	7471B	549136
160-43113-2	FSS-045-081721	Total/NA	Solid	7471B	549136
160-43113-3	FSS-046-081721	Total/NA	Solid	7471B	549136
160-43113-4	FSS-047-081721	Total/NA	Solid	7471B	549136
160-43113-5	FSS-048-081721	Total/NA	Solid	7471B	549136
160-43113-6	FSS-049-081721	Total/NA	Solid	7471B	549136
160-43113-7	FSS-050-081721	Total/NA	Solid	7471B	549136
160-43113-8	FSS-051-081721	Total/NA	Solid	7471B	549136
160-43113-9	FSS-052-081721	Total/NA	Solid	7471B	549136
160-43113-10	FSS-053-081721	Total/NA	Solid	7471B	549136
160-43113-11	FSS-054-081721	Total/NA	Solid	7471B	549136
160-43113-12	FSS-055-081721	Total/NA	Solid	7471B	549136
160-43113-13	FSS-056-081721	Total/NA	Solid	7471B	549136
160-43113-14	FSS-256-081721	Total/NA	Solid	7471B	549136

Metals (Continued)

Analysis Batch: 549555 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-15	FSS-057-081721	Total/NA	Solid	7471B	549136
160-43113-16	FSS-257-081721	Total/NA	Solid	7471B	549136
160-43113-17	FSS-058-081721	Total/NA	Solid	7471B	549136
160-43113-18	FSS-258-081721	Total/NA	Solid	7471B	549136
MB 280-549136/1-A	Method Blank	Total/NA	Solid	7471B	549136
LCS 280-549136/2-A	Lab Control Sample	Total/NA	Solid	7471B	549136
LCSD 280-549136/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549136
160-43113-10 MS	FSS-053-081721	Total/NA	Solid	7471B	549136
160-43113-10 MSD	FSS-053-081721	Total/NA	Solid	7471B	549136
160-43113-11 MS	FSS-054-081721	Total/NA	Solid	7471B	549136
160-43113-11 MSD	FSS-054-081721	Total/NA	Solid	7471B	549136
160-43113-12 MS	FSS-055-081721	Total/NA	Solid	7471B	549136
160-43113-12 MSD	FSS-055-081721	Total/NA	Solid	7471B	549136

General Chemistry

Analysis Batch: 547985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	Moisture	
160-43113-2	FSS-045-081721	Total/NA	Solid	Moisture	
160-43113-3	FSS-046-081721	Total/NA	Solid	Moisture	
160-43113-4	FSS-047-081721	Total/NA	Solid	Moisture	
160-43113-5	FSS-048-081721	Total/NA	Solid	Moisture	
160-43113-6	FSS-049-081721	Total/NA	Solid	Moisture	
160-43113-7	FSS-050-081721	Total/NA	Solid	Moisture	
160-43113-8	FSS-051-081721	Total/NA	Solid	Moisture	
160-43113-9	FSS-052-081721	Total/NA	Solid	Moisture	
160-43113-10	FSS-053-081721	Total/NA	Solid	Moisture	
160-43113-11	FSS-054-081721	Total/NA	Solid	Moisture	
160-43113-12	FSS-055-081721	Total/NA	Solid	Moisture	
160-43113-13	FSS-056-081721	Total/NA	Solid	Moisture	
160-43113-14	FSS-256-081721	Total/NA	Solid	Moisture	
160-43113-15	FSS-057-081721	Total/NA	Solid	Moisture	
160-43113-16	FSS-257-081721	Total/NA	Solid	Moisture	
160-43113-17	FSS-058-081721	Total/NA	Solid	Moisture	
160-43113-18	FSS-258-081721	Total/NA	Solid	Moisture	
160-43113-4 DU	FSS-047-081721	Total/NA	Solid	Moisture	

Rad

Leach Batch: 522952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43084-D-26-H DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 523235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43079-A-2-H DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43079-A-2-L DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 523370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 523370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-2	FSS-045-081721	Total/NA	Solid	Dry and Grind	
160-43113-3	FSS-046-081721	Total/NA	Solid	Dry and Grind	
160-43113-4	FSS-047-081721	Total/NA	Solid	Dry and Grind	
160-43113-5	FSS-048-081721	Total/NA	Solid	Dry and Grind	
160-43113-6	FSS-049-081721	Total/NA	Solid	Dry and Grind	
160-43113-7	FSS-050-081721	Total/NA	Solid	Dry and Grind	
160-43113-8	FSS-051-081721	Total/NA	Solid	Dry and Grind	
160-43113-9	FSS-052-081721	Total/NA	Solid	Dry and Grind	
160-43113-10	FSS-053-081721	Total/NA	Solid	Dry and Grind	
160-43113-11	FSS-054-081721	Total/NA	Solid	Dry and Grind	
160-43113-12	FSS-055-081721	Total/NA	Solid	Dry and Grind	
160-43113-13	FSS-056-081721	Total/NA	Solid	Dry and Grind	
160-43113-14	FSS-256-081721	Total/NA	Solid	Dry and Grind	
160-43113-15	FSS-057-081721	Total/NA	Solid	Dry and Grind	
160-43113-16	FSS-257-081721	Total/NA	Solid	Dry and Grind	
160-43113-17	FSS-058-081721	Total/NA	Solid	Dry and Grind	
160-43113-18	FSS-258-081721	Total/NA	Solid	Dry and Grind	
160-43113-13 DU	FSS-056-081721	Total/NA	Solid	Dry and Grind	
160-43113-18 DU	FSS-258-081721	Total/NA	Solid	Dry and Grind	

Leach Batch: 523723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-6-L DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 523941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-2	FSS-045-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-3	FSS-046-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-4	FSS-047-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-5	FSS-048-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-6	FSS-049-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-7	FSS-050-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-8	FSS-051-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-9	FSS-052-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-10	FSS-053-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-11	FSS-054-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-12	FSS-055-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-13	FSS-056-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-14	FSS-256-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-15	FSS-057-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-16	FSS-257-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-17	FSS-058-081721	Total/NA	Solid	Fill_Geo-21	523370
160-43113-18	FSS-258-081721	Total/NA	Solid	Fill_Geo-21	523370
MB 160-523941/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-523941/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43113-18 DU	FSS-258-081721	Total/NA	Solid	Fill_Geo-21	523370

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-6-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Rad

Prep Batch: 524624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	ExtChrom	523370
160-43113-2	FSS-045-081721	Total/NA	Solid	ExtChrom	523370
160-43113-3	FSS-046-081721	Total/NA	Solid	ExtChrom	523370
160-43113-4	FSS-047-081721	Total/NA	Solid	ExtChrom	523370
160-43113-5	FSS-048-081721	Total/NA	Solid	ExtChrom	523370
160-43113-6	FSS-049-081721	Total/NA	Solid	ExtChrom	523370
160-43113-7	FSS-050-081721	Total/NA	Solid	ExtChrom	523370
160-43113-8	FSS-051-081721	Total/NA	Solid	ExtChrom	523370
MB 160-524624/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524624/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43079-A-2-H DU	Duplicate	Total/NA	Solid	ExtChrom	523235

Prep Batch: 524625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	Leach_Precip	
160-43113-2	FSS-045-081721	Total/NA	Solid	Leach_Precip	
160-43113-3	FSS-046-081721	Total/NA	Solid	Leach_Precip	
160-43113-4	FSS-047-081721	Total/NA	Solid	Leach_Precip	
160-43113-5	FSS-048-081721	Total/NA	Solid	Leach_Precip	
160-43113-6	FSS-049-081721	Total/NA	Solid	Leach_Precip	
160-43113-7	FSS-050-081721	Total/NA	Solid	Leach_Precip	
160-43113-8	FSS-051-081721	Total/NA	Solid	Leach_Precip	
MB 160-524625/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-524625/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43079-A-2-J DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 524626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	ExtChrom	523370
160-43113-2	FSS-045-081721	Total/NA	Solid	ExtChrom	523370
160-43113-3	FSS-046-081721	Total/NA	Solid	ExtChrom	523370
160-43113-4	FSS-047-081721	Total/NA	Solid	ExtChrom	523370
160-43113-5	FSS-048-081721	Total/NA	Solid	ExtChrom	523370
160-43113-6	FSS-049-081721	Total/NA	Solid	ExtChrom	523370
160-43113-7	FSS-050-081721	Total/NA	Solid	ExtChrom	523370
160-43113-8	FSS-051-081721	Total/NA	Solid	ExtChrom	523370
MB 160-524626/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524626/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43079-A-2-L DU	Duplicate	Total/NA	Solid	ExtChrom	523235

Prep Batch: 524992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-9	FSS-052-081721	Total/NA	Solid	ExtChrom	523370
160-43113-10	FSS-053-081721	Total/NA	Solid	ExtChrom	523370
160-43113-11	FSS-054-081721	Total/NA	Solid	ExtChrom	523370
160-43113-12	FSS-055-081721	Total/NA	Solid	ExtChrom	523370
160-43113-13	FSS-056-081721	Total/NA	Solid	ExtChrom	523370
160-43113-14	FSS-256-081721	Total/NA	Solid	ExtChrom	523370
160-43113-15	FSS-057-081721	Total/NA	Solid	ExtChrom	523370
160-43113-16	FSS-257-081721	Total/NA	Solid	ExtChrom	523370
160-43113-17	FSS-058-081721	Total/NA	Solid	ExtChrom	523370

Rad (Continued)

Prep Batch: 524992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-18	FSS-258-081721	Total/NA	Solid	ExtChrom	523370
MB 160-524992/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524992/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-6-F DU	Duplicate	Total/NA	Solid	ExtChrom	524231

Prep Batch: 524999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-9	FSS-052-081721	Total/NA	Solid	ExtChrom	523370
160-43113-10	FSS-053-081721	Total/NA	Solid	ExtChrom	523370
160-43113-11	FSS-054-081721	Total/NA	Solid	ExtChrom	523370
160-43113-12	FSS-055-081721	Total/NA	Solid	ExtChrom	523370
160-43113-13	FSS-056-081721	Total/NA	Solid	ExtChrom	523370
160-43113-14	FSS-256-081721	Total/NA	Solid	ExtChrom	523370
160-43113-15	FSS-057-081721	Total/NA	Solid	ExtChrom	523370
160-43113-16	FSS-257-081721	Total/NA	Solid	ExtChrom	523370
160-43113-17	FSS-058-081721	Total/NA	Solid	ExtChrom	523370
160-43113-18	FSS-258-081721	Total/NA	Solid	ExtChrom	523370
MB 160-524999/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524999/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-6-L DU	Duplicate	Total/NA	Solid	ExtChrom	523723

Prep Batch: 525000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-9	FSS-052-081721	Total/NA	Solid	Leach_Precip	
160-43113-10	FSS-053-081721	Total/NA	Solid	Leach_Precip	
160-43113-11	FSS-054-081721	Total/NA	Solid	Leach_Precip	
160-43113-12	FSS-055-081721	Total/NA	Solid	Leach_Precip	
160-43113-13	FSS-056-081721	Total/NA	Solid	Leach_Precip	
160-43113-14	FSS-256-081721	Total/NA	Solid	Leach_Precip	
160-43113-15	FSS-057-081721	Total/NA	Solid	Leach_Precip	
160-43113-16	FSS-257-081721	Total/NA	Solid	Leach_Precip	
160-43113-17	FSS-058-081721	Total/NA	Solid	Leach_Precip	
160-43113-18	FSS-258-081721	Total/NA	Solid	Leach_Precip	
MB 160-525000/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525000/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-D-6-J DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 525456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-2	FSS-045-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-3	FSS-046-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-4	FSS-047-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-5	FSS-048-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-6	FSS-049-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-7	FSS-050-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-8	FSS-051-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-9	FSS-052-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-10	FSS-053-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-11	FSS-054-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-12	FSS-055-081721	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 525456 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-13	FSS-056-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-14	FSS-256-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-15	FSS-057-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-16	FSS-257-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-17	FSS-058-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-18	FSS-258-081721	Total/NA	Solid	LSC_Dist_Susp	
MB 160-525456/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-525456/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43113-17 MS	FSS-058-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-18 DU	FSS-258-081721	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 525601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	DPS-7	523370
160-43113-2	FSS-045-081721	Total/NA	Solid	DPS-7	523370
160-43113-3	FSS-046-081721	Total/NA	Solid	DPS-7	523370
160-43113-4	FSS-047-081721	Total/NA	Solid	DPS-7	523370
160-43113-5	FSS-048-081721	Total/NA	Solid	DPS-7	523370
160-43113-6	FSS-049-081721	Total/NA	Solid	DPS-7	523370
160-43113-7	FSS-050-081721	Total/NA	Solid	DPS-7	523370
160-43113-8	FSS-051-081721	Total/NA	Solid	DPS-7	523370
160-43113-9	FSS-052-081721	Total/NA	Solid	DPS-7	523370
160-43113-10	FSS-053-081721	Total/NA	Solid	DPS-7	523370
160-43113-11	FSS-054-081721	Total/NA	Solid	DPS-7	523370
160-43113-12	FSS-055-081721	Total/NA	Solid	DPS-7	523370
160-43113-13	FSS-056-081721	Total/NA	Solid	DPS-7	523370
160-43113-14	FSS-256-081721	Total/NA	Solid	DPS-7	523370
160-43113-15	FSS-057-081721	Total/NA	Solid	DPS-7	523370
160-43113-16	FSS-257-081721	Total/NA	Solid	DPS-7	523370
160-43113-17	FSS-058-081721	Total/NA	Solid	DPS-7	523370
160-43113-18	FSS-258-081721	Total/NA	Solid	DPS-7	523370
MB 160-525601/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-525601/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43084-D-26-H DU	Duplicate	Total/NA	Solid	DPS-7	522952

Prep Batch: 526025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-2	FSS-045-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-3	FSS-046-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-4	FSS-047-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-5	FSS-048-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-6	FSS-049-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-7	FSS-050-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-8	FSS-051-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-9	FSS-052-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-10	FSS-053-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-11	FSS-054-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-12	FSS-055-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-13	FSS-056-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-14	FSS-256-081721	Total/NA	Solid	Ext_Chrom_LSC	523370

Rad (Continued)

Prep Batch: 526025 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-15	FSS-057-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-16	FSS-257-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-17	FSS-058-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
160-43113-18	FSS-258-081721	Total/NA	Solid	Ext_Chrom_LSC	523370
MB 160-526025/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-526025/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43113-13 DU	FSS-056-081721	Total/NA	Solid	Ext_Chrom_LSC	523370

Prep Batch: 527261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-7	FSS-050-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-8	FSS-051-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-9	FSS-052-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-10	FSS-053-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-11	FSS-054-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-12	FSS-055-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-13	FSS-056-081721	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527261/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527261/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43124-C-1-D MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43124-C-1-C DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43113-1	FSS-044-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-2	FSS-045-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-3	FSS-046-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-4	FSS-047-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-5	FSS-048-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-6	FSS-049-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-14	FSS-256-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-15	FSS-057-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-16	FSS-257-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-17	FSS-058-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-18	FSS-258-081721	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527451/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527451/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43113-1 MS	FSS-044-081721	Total/NA	Solid	LSC_Dist_Susp	
160-43113-1 DU	FSS-044-081721	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43113-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43084-D-26-H DU	Duplicate	81.7	91.6
160-43113-1	FSS-044-081721	83.8	87.9
160-43113-2	FSS-045-081721	80.1	89.0
160-43113-3	FSS-046-081721	82.9	81.1
160-43113-4	FSS-047-081721	82.3	92.3
160-43113-5	FSS-048-081721	75.9	87.5
160-43113-6	FSS-049-081721	79.9	79.6
160-43113-7	FSS-050-081721	76.1	83.4
160-43113-8	FSS-051-081721	83.8	90.5
160-43113-9	FSS-052-081721	75.3	85.6
160-43113-10	FSS-053-081721	78.5	89.7
160-43113-11	FSS-054-081721	75.2	90.1
160-43113-12	FSS-055-081721	40.5	90.1
160-43113-13	FSS-056-081721	84.6	89.0
160-43113-14	FSS-256-081721	85.6	89.7
160-43113-15	FSS-057-081721	79.8	90.1
160-43113-16	FSS-257-081721	83.0	91.2
160-43113-17	FSS-058-081721	82.8	84.5
160-43113-18	FSS-258-081721	78.7	84.5
LCS 160-525601/2-A	Lab Control Sample	89.8	90.5
MB 160-525601/1-A	Method Blank	90.1	89.3

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43079-A-2-H DU	Duplicate	62.9
160-43113-1	FSS-044-081721	54.2
160-43113-2	FSS-045-081721	75.3
160-43113-3	FSS-046-081721	59.3
160-43113-4	FSS-047-081721	83.8
160-43113-5	FSS-048-081721	67.2
160-43113-6	FSS-049-081721	80.1
160-43113-7	FSS-050-081721	68.0
160-43113-8	FSS-051-081721	59.7
160-43113-9	FSS-052-081721	83.4
160-43113-10	FSS-053-081721	70.9
160-43113-11	FSS-054-081721	81.1
160-43113-12	FSS-055-081721	72.3
160-43113-13	FSS-056-081721	61.8
160-43113-14	FSS-256-081721	62.4
160-43113-15	FSS-057-081721	67.1
160-43113-16	FSS-257-081721	62.0
160-43113-17	FSS-058-081721	51.0

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43113-18	FSS-258-081721	55.8							
160-43124-D-6-F DU	Duplicate	79.8							
LCS 160-524624/2-A	Lab Control Sample	50.4							
LCS 160-524992/2-A	Lab Control Sample	94.1							
MB 160-524624/1-A	Method Blank	73.8							
MB 160-524992/1-A	Method Blank	95.2							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	U-232 (30-110)							
160-43079-A-2-L DU	Duplicate	62.2							
160-43113-1	FSS-044-081721	61.0							
160-43113-2	FSS-045-081721	71.7							
160-43113-3	FSS-046-081721	66.0							
160-43113-4	FSS-047-081721	72.3							
160-43113-5	FSS-048-081721	58.0							
160-43113-6	FSS-049-081721	76.7							
160-43113-7	FSS-050-081721	72.3							
160-43113-8	FSS-051-081721	66.4							
160-43113-9	FSS-052-081721	80.4							
160-43113-10	FSS-053-081721	87.0							
160-43113-11	FSS-054-081721	75.2							
160-43113-12	FSS-055-081721	85.5							
160-43113-13	FSS-056-081721	72.3							
160-43113-14	FSS-256-081721	63.8							
160-43113-15	FSS-057-081721	64.0							
160-43113-16	FSS-257-081721	58.9							
160-43113-17	FSS-058-081721	55.0							
160-43113-18	FSS-258-081721	66.1							
160-43124-D-6-L DU	Duplicate	66.2							
LCS 160-524626/2-A	Lab Control Sample	64.9							
LCS 160-524999/2-A	Lab Control Sample	95.0							
MB 160-524626/1-A	Method Blank	68.5							
MB 160-524999/1-A	Method Blank	102							

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Ni (40-110)							
160-43113-1	FSS-044-081721	123 Q							
160-43113-2	FSS-045-081721	94.9							

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43113-3	FSS-046-081721	105						
160-43113-4	FSS-047-081721	101						
160-43113-5	FSS-048-081721	92.0						
160-43113-6	FSS-049-081721	104						
160-43113-7	FSS-050-081721	103						
160-43113-8	FSS-051-081721	98.3						
160-43113-9	FSS-052-081721	105						
160-43113-10	FSS-053-081721	107						
160-43113-11	FSS-054-081721	102						
160-43113-12	FSS-055-081721	106						
160-43113-13	FSS-056-081721	99.5						
160-43113-13 DU	FSS-056-081721	102						
160-43113-14	FSS-256-081721	105						
160-43113-15	FSS-057-081721	96.5						
160-43113-16	FSS-257-081721	95.1						
160-43113-17	FSS-058-081721	104						
160-43113-18	FSS-258-081721	103						
LCS 160-526025/2-A	Lab Control Sample	103						
MB 160-526025/1-A	Method Blank	115 Q						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43079-A-2-J DU	Duplicate	62.9						
160-43113-1	FSS-044-081721	54.2						
160-43113-2	FSS-045-081721	75.3						
160-43113-3	FSS-046-081721	59.3						
160-43113-4	FSS-047-081721	83.8						
160-43113-5	FSS-048-081721	67.2						
160-43113-6	FSS-049-081721	80.1						
160-43113-7	FSS-050-081721	68.0						
160-43113-8	FSS-051-081721	59.7						
160-43113-9	FSS-052-081721	83.4						
160-43113-10	FSS-053-081721	70.9						
160-43113-11	FSS-054-081721	81.1						
160-43113-12	FSS-055-081721	72.3						
160-43113-13	FSS-056-081721	61.8						
160-43113-14	FSS-256-081721	62.4						
160-43113-15	FSS-057-081721	67.1						
160-43113-16	FSS-257-081721	62.0						
160-43113-17	FSS-058-081721	51.0						
160-43113-18	FSS-258-081721	55.8						
160-43124-D-6-J DU	Duplicate	79.8						
LCS 160-524625/2-A	Lab Control Sample	50.4						
LCS 160-525000/2-A	Lab Control Sample	94.1						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43113-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Pu-242 (T)							
Lab Sample ID	Client Sample ID	(30-110)							
MB 160-524625/1-A	Method Blank	73.8							
MB 160-525000/1-A	Method Blank	95.2							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/21/2021
Sample Receipt Date	08/23/2021
RJ Lee Group Job No.	AOH1063198-0
Authorization/P.O. No.	
Client Job No./Name	160-43113-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546258.HPL	FSS-044-081721 (160-43113-1)	Yes	1	ND		100.00	CA, AM, F, OP, MI, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546259.HPL	FSS-045-081721 (160-43113-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP 198.1.							
Weight Loss: 0.0%								
10546260.HPL	FSS-046-081721 (160-43113-3)	Yes	1	ND		100.00	Q, CA, F, M, OP	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43113-1 RJ Lee Group Job No: AOH1063198-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546261.HPL	FSS-047-081721 (160-43113-4)	Yes	1	ND		100.00	Q, CA, F, OP, OR	EAF-09/16/2021
Description:	Beige Sediment 400 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546262.HPL	FSS-048-081721 (160-43113-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, OR	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP 198.1.							
Weight Loss: 0.0%								
10546263.HPL	FSS-049-081721 (160-43113-6)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP 198.1.							
Weight Loss: 0.0%								
10546264.HPL	FSS-050-081721 (160-43113-7)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546265.HPL	FSS-051-081721 (160-43113-8)	Yes	1	ND		100.00	Q, CA, F, AM, OP, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43113-1 RJ Lee Group Job No: AOH1063198-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546266.HPL	FSS-052-081721 (160-43113-9)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546267.HPL	FSS-053-081721 (160-43113-10)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/17/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546268.HPL	FSS-054-081721 (160-43113-11)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/16/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546269.HPL	FSS-055-081721 (160-43113-12)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-09/17/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43113-1 RJ Lee Group Job No: AOH1063198-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546270.HPL	FSS-056-081721 (160-43113-13)	Yes	1	ND		100.00	Q, CA, CL, AM, OR, OP, MI, M	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546271.HPL	FSS-256-081721 (160-43113-14)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546272.HPL	FSS-057-081721 (160-43113-15)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546273.HPL	FSS-257-081721 (160-43113-16)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OR, OP, MI, M	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43113-1 RJ Lee Group Job No: AOH1063198-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546274.HPL	FSS-058-081721 (160-43113-17)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M, OR	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546275.HPL	FSS-258-081721 (160-43113-18)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OR, OP, MI, M	AC-09/21/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43113-1 RJ Lee Group Job No: AOH1063198-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: _____

Alexandra Cheek, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.4
Samples FSS-059 through -081

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-43124-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/6/2021 8:03:17 PM

Ivan Vania, Project Manager II
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LINKS

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

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

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Job ID: 160-43124-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43124-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/19/2021 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 4.0º C, 21.5º C, 22.4º C and 23.5º C.

Receipt Exceptions

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The client updated the sample ID for 160-43124-10 from FSS-064-061821 to HFBR-021-061821.

ASBESTOS

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/12/2021 and analyzed on 09/13/2021.

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

MERCURY (CVAA)

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/14/2021.

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

PERCENT SOLIDS

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/01/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/26/2021, prepared on 09/18/2021 and analyzed on 09/30/2021.

Preparation Batch 160-527608:
The LCS recovered at 73.83% which is below the QC limit of 75%. The laboratory does not believe the 1.2% low bias would affect the sample results to a significant degree. All results were at least one order of magnitude below the project action level of 15 pCi/g; therefore, the results were reported: (LCS 160-527608/2-A).

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

TRITIUM
Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/09/2021 and analyzed on 09/10/2021 and 09/11/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/26/2021, prepared on 08/31/2021 and 09/05/2021 and analyzed on 09/10/2021, 09/14/2021, 09/18/2021 and 09/20/2021.

Preparation Batch 160-525614:
The samples exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: FSS-063-081821 (160-43124-8) and FSS-072-081821 (160-43124-19).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Isotopic Uranium (Alpha Spectrometry) in

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

accordance with DOE. The samples were leached on 08/23/2021, prepared on 08/31/2021 and 09/05/2021 and analyzed on 09/10/2021, 09/14/2021, 09/15/2021, 09/16/2021, 09/18/2021 and 09/20/2021.

Preparation Batch 160-524992:
Detectors 131-146 were calibrated in August; therefore, the monthly calibration check (CCV) was not required and will not be included in the deliverable. Note: because a CCV was not analyzed, it is possible that an older CCV will pull into the deliverable. This CCV is not applicable: FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2) and FSS-060-081821 (160-43124-3).

Preparation Batch 160-525622:
Sample 160-43124-28 was counted on a detector for which the daily pulser was inadvertently left on during the count. The sample exhibited the tracer peak within the expected energy/centroid tolerance (50 keV) and recoveries are within acceptance limits. The spectrum clearly shows the pulser peak causing a high spectrum range not allowing the LCS peaks to be visible. The laboratory does not believe this excursion adversely affects the results: FSS-080-081821 (160-43124-28).

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

CARBON-14 BY LSC

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/16/2021, 09/17/2021, 09/20/2021 and 09/21/2021 and analyzed on 09/17/2021, 09/18/2021, 09/21/2021 and 09/22/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/23/2021, prepared on 08/26/2021 and analyzed on 09/18/2021, 09/19/2021 and 09/20/2021.

Preparation Batch 160-524254:
The replicate precision for Pb-212 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (160-43154-D-9-F DU).

For samples FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30), FSS-281-081821 (160-43124-31), (LCS 160-524254/2-A), (MB 160-524254/1-A), (160-43154-D-9-E) and (160-43154-D-9-F DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-524240:
The replicate precision for Ac-228/Th-232 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (160-43124-D-20-E DU).

For samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), (LCS 160-524240/2-A), (MB 160-524240/1-A), and (160-43124-D-20-E DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/26/2021, prepared on 09/09/2021 and 09/13/2021 and analyzed on 09/19/2021, 09/20/2021, 09/21/2021, 09/22/2021, 09/23/2021 and 09/24/2021.

Preparation Batch 160-526201:
The Method Blank (MB) recovered above the MDC, but below the reporting limit (RL). The value should be considered an estimate. Ni-63 was not detected above the MDC in the samples; therefore, the results were reported: FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), (LCS 160-526201/2-A), (MB 160-526201/1-A), and (160-43124-D-2-J DU).

Preparation Batch 160-526820:
The Method Blank (MB) for the samples had a result slightly above the MDC. The value should be considered an estimate Ni-63 was not detected above the MDC in the blank and samples; therefore, the results were reported: FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22), FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30), FSS-281-081821 (160-43124-31), (MB 160-526820/1-A), (LCS 160-526820/-A), and FSS-279-081821 (160-43124-27-H-DU).
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PLUTONIUM 241

Samples FSS-059-081821 (160-43124-1), FSS-259-081821 (160-43124-2), FSS-060-081821 (160-43124-3), FSS-260-081821 (160-43124-4), FSS-061-081821 (160-43124-5), FSS-261-081821 (160-43124-6), FSS-062-081821 (160-43124-7), FSS-063-081821 (160-43124-8), FSS-064-081821 (160-43124-9), HFBR-021-061821 (160-43124-10), FSS-065-081821 (160-43124-11), FSS-066-081821 (160-43124-12), FSS-181-081821 (160-43124-13), FSS-067-081821 (160-43124-14), FSS-068-081821 (160-43124-15), FSS-069-081821 (160-43124-16), FSS-070-081821 (160-43124-17), FSS-071-081821 (160-43124-18), FSS-072-081821 (160-43124-19), FSS-073-081821 (160-43124-20), FSS-074-081821 (160-43124-21), FSS-075-081821 (160-43124-22),

Job ID: 160-43124-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

FSS-076-081821 (160-43124-23), FSS-077-081821 (160-43124-24), FSS-078-081821 (160-43124-25), FSS-079-081821 (160-43124-26), FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30) and FSS-281-081821 (160-43124-31) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 08/31/2021 and 09/05/2021 and analyzed on 09/16/2021, 09/24/2021, 09/28/2021 and 09/29/2021.

Preparation Batch 160-525621:
The Laboratory Control Sample (LCS) recovered at 129% which was above the upper control limit of 125%. The sample activities were below the RL; therefore, the results were reported: FSS-279-081821 (160-43124-27), FSS-080-081821 (160-43124-28), FSS-280-081821 (160-43124-29), FSS-081-081821 (160-43124-30), FSS-281-081821 (160-43124-31), (MB 160-525621/1-A), (LCS 160-525621/2-A), and (160-43124-27-H DU).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

160-43124 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing TestAmerica

☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-18-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-059-081821	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 0"-6"
FSS-259-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 0"-6" Dup
FSS-060-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 6"-12"
FSS-260-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 6"-12" Dup
FSS-061-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 18"-24"
FSS-261-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS01 18"-24" Dup
FSS-062-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS07 0"-6"
FSS-063-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS07 6"-12"
FSS-064-081721	18-Aug	8:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - SS07 18"-24"
FSS-064-061821	18-Jun	10:00	C	S	3	N	N	1	1				1	1	1	1	1	1	SU 7D - Footer B - composite
FSS-065-081721	18-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS016 0"-6"
FSS-066-081721	18-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS016 6"-12"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-18-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Michael Cominsky	Company: EPA SDC	Date/Time: AUG 19 2021 09:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Page 10 of 135

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-18-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-066-081721	18-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS016 18"-24"
FSS-067-081721	18-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS015 0"-6"
FSS-068-081721	18-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS015 6"-12"
FSS-069-081721	18-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS015 18"-24"
FSS-070-081721	18-Aug	9:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS014 0"-6"
FSS-071-081721	18-Aug	9:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS014 6"-12"
FSS-072-081721	18-Aug	9:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS014 18"-24"
FSS-073-081721	18-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS013 0"-6"
FSS-074-081721	18-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS013 6"-12"
FSS-075-081721	18-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS013 18"-24"
FSS-076-081721	18-Aug	10:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS012 0"-6"
FSS-077-081721	18-Aug	10:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS012 6"-12"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-18-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Micha Konishinge	Company: EA SR	Date/Time: AUG 19 2021 09:00
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-18-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___3___ of ___3___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-078-081721	18-Aug	10:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS012 18"-24"
FSS-079-081721	18-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 0"-6"
FSS-279-081721	18-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 0"-6" Dup
FSS-080-081721	18-Aug	11:00	C	S	4	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 6"-12"
FSS-280-081721	18-Aug	11:00	C	S	4	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 6"-12" Dup
FSS-081-081721	18-Aug	11:00	C	S	4	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 18"-24"
FSS-281-081721	18-Aug	11:00	C	S	4	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 18"-24" Dup

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-18-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: Willia Venninger	Company: FedEx	Date/Time: AUG 19 2021 0920
Relinquished by: FED EX	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Vania, Ivan

From: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Sent: Friday, August 20, 2021 8:46 AM
To: Ridenhower, Rhonda
Cc: Vania, Ivan
Subject: RE: ETA samples received- J43124

EXTERNAL EMAIL*

Thank you Rhonda. Yes, the ID should be -081821.

Michael G. Grifasi, CPG, PG (WA, NY)
Project Manager/Senior Geologist
FPM Remediations, Inc.
An Olgoonik Company

From: Ridenhower, Rhonda <Rhonda.Ridenhower@Eurofinset.com>
Sent: Thursday, August 19, 2021 8:21 PM
To: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Cc: Vania, Ivan <Ivan.Vania@Eurofinset.com>
Subject: ETA samples received- J43124

Good evening,

Can you confirm if the sample ID's are correct? Typically the sample ID contains the sample date and only the first sample follows the normal ID pattern.

Sample ID FSS-259-081721, sample date is 18-Aug (should this ID be -081821). I am sorry to even ask, but wanted to double check prior to complete the review.

Thanks,
Rhonda

Rhonda Ridenhower
Client Service Manager
Interim Laboratory Director

How are we doing? Let us know!

Phone: 314-298-8566
Direct: 314-787-8227

E-mail: **Rhonda.Ridenhower@eurofinset.com**

* WARNING - EXTERNAL: This email originated from outside of Eurofins Environment Testing America. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

Vania, Ivan

From: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Sent: Tuesday, August 24, 2021 8:37 AM
To: Vania, Ivan
Cc: Ours, Daniel; Hay, Scott
Subject: RE: Eurofins TestAmerica sample confirmation files from 160-43124-1 BNL Decommissioning Project

EXTERNAL EMAIL*

Ivan,
Apologies, I was looking for some direction from our field crew. To answer your question from yesterday, we do not need it analyzed for lead, mercury, and asbestos. This should be a concrete sample.

Additionally, that particular sample is not an FSS sample so the ID will need to be revised. Please revise FSS-064-061821 to HFBR-021-061821.

Thank you,
Michael G. Grifasi, CPG, PG (WA, NY)
Project Manager/Senior Geologist

FPM Remediations, Inc.
An Olgoonik Company

From: Vania, Ivan <Ivan.Vania@Eurofinset.com>
Sent: Monday, August 23, 2021 6:09 PM
To: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Subject: FW: Eurofins TestAmerica sample confirmation files from 160-43124-1 BNL Decommissioning Project

Good Afternoon Michael,

Any idea on this issue yet?

Thanks,

Ivan Vania
Project Manager II

How are we doing? Let us know!

Eurofins Environment Testing America
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-787-8270

Mobile: 314-749-8448

E-mail: Ivan.Vania@Eurofinset.com

From: Vania, Ivan
Sent: Monday, August 23, 2021 12:42 PM
To: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Subject: RE: Eurofins TestAmerica sample confirmation files from 160-43124-1 BNL Decommissioning Project

Good Afternoon Michael,

Sample 160-43124-10 FSS-064-061821 is not marked for asbestos, lead, or mercury analysis. Can you please confirm this is correct?

Regards,

Ivan Vania
Project Manager II

How are we doing? Let us know!

Eurofins Environment Testing America
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-787-8270
Mobile: 314-749-8448

E-mail: Ivan.Vania@Eurofinset.com

From: Grifasi, Michael <m.grifasi@fpm-remediations.com>
Sent: Sunday, August 22, 2021 8:57 AM
To: Ridenhower, Rhonda <Rhonda.Ridenhower@Eurofinset.com>
Cc: Vania, Ivan <Ivan.Vania@Eurofinset.com>
Subject: RE: Eurofins TestAmerica sample confirmation files from 160-43124-1 BNL Decommissioning Project

EXTERNAL EMAIL*

Thank you Rhonda. Can I ask you to look into the log-in status of the samples collected on 8/17/21? CoCs are attached.

Thanks again,
Michael G. Grifasi, CPG, PG (WA, NY)
Project Manager/Senior Geologist

FPM Remediations, Inc.
An Olgoonik Company

From: Rhonda Ridenhower <Rhonda.Ridenhower@Eurofinset.com>
Sent: Friday, August 20, 2021 6:30 PM
To: Cancemi, Ben <b.cancemi@fpm-group.com>; Forse, Dave <d.forse@fpm-remediations.com>; Grifasi, Michael <m.grifasi@fpm-remediations.com>; Mike Plonski <mplonski@cabreraservices.com>
Subject: Eurofins TestAmerica sample confirmation files from 160-43124-1 BNL Decommissioning Project

Hello,

Attached please find the sample confirmation files for job 160-43124-1; BNL Decommissioning Project

Please feel free to contact me or your PM Ivan Vania if you have any questions.

Thank you.

Rhonda E Ridenhower
Client Services Manager

Eurofins TestAmerica, St. Louis

E-mail: Rhonda.Ridenhower@Eurofinset.com
www.eurofinsus.com/env

Reference: [160-213012]
Attachments: 1

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* WARNING - EXTERNAL: This email originated from outside of Eurofins Environment Testing America. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217895.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/30/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-059-081821 (160-43124-1)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-259-081821 (160-43124-2)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-060-081821 (160-43124-3)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-260-081821 (160-43124-4)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-061-081821 (160-43124-5)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-261-081821 (160-43124-6)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-062-081821 (160-43124-7)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-063-081821 (160-43124-8)	8/18/21	08:00 Eastern		Solid			X	X	X	1	
FSS-064-081821 (160-43124-9)	8/18/21	08:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Level 1 radioactive

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Michael Kennington	Date/Time: AUG 20 2021 17:00	Company: ETA SDG	Received by:	Date/Time: 08/21/2021 1000	Company: EMDEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.5, 3.0 IR11 +1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217895.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/30/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-065-081821 (160-43124-11)	8/18/21	09:30 Eastern		Solid			X	X	X	1	
FSS-066-081821 (160-43124-12)	8/18/21	09:30 Eastern		Solid			X	X	X	1	
FSS-066-081821 (160-43124-13)	8/18/21	09:30 Eastern		Solid			X	X	X	1	
FSS-067-081821 (160-43124-14)	8/18/21	09:00 Eastern		Solid			X	X	X	1	
FSS-068-081821 (160-43124-15)	8/18/21	09:00 Eastern		Solid			X	X	X	1	
FSS-069-081821 (160-43124-16)	8/18/21	09:00 Eastern		Solid			X	X	X	1	
FSS-070-081821 (160-43124-17)	8/18/21	09:45 Eastern		Solid			X	X	X	1	
FSS-071-081821 (160-43124-18)	8/18/21	09:45 Eastern		Solid			X	X	X	1	
FSS-072-081821 (160-43124-19)	8/18/21	09:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date:	Time: Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Micha Kominkiewicz	AUG 20 2021 17:00	EDA SC			
Relinquished by:	Date/Time:	Company	Received by:	08/21/2021 1000	ETA/EIV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217895.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/30/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-073-081821 (160-43124-20)	8/18/21	10:30 Eastern		Solid			X	X	X	1	
FSS-074-081821 (160-43124-21)	8/18/21	10:30 Eastern		Solid			X	X	X	1	
FSS-075-081821 (160-43124-22)	8/18/21	10:30 Eastern		Solid			X	X	X	1	
FSS-076-081821 (160-43124-23)	8/18/21	10:45 Eastern		Solid			X	X	X	1	
FSS-077-081821 (160-43124-24)	8/18/21	10:45 Eastern		Solid			X	X	X	1	
FSS-078-081821 (160-43124-25)	8/18/21	10:45 Eastern		Solid			X	X	X	1	
FSS-079-081821 (160-43124-26)	8/18/21	11:00 Eastern		Solid			X	X	X	1	
FSS-279-081821 (160-43124-27)	8/18/21	11:00 Eastern		Solid			X	X	X	1	
FSS-080-081821 (160-43124-28)	8/18/21	11:00 Eastern		Solid			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Level 1 radioactive

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Maicha Konichinger	Date/Time: AUG 20 2021 17:00	Company: ETA STL	Received by:
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Date/Time	Company
08/21/2021 1000	ETA) STL
Date/Time:	Company
Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217895.4
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/30/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-280-081821 (160-43124-29)	8/18/21	11:00 Eastern		Solid			X	X	X	2	
FSS-081-081821 (160-43124-30)	8/18/21	11:00 Eastern		Solid			X	X	X	2	
FSS-281-081821 (160-43124-31)	8/18/21	11:00 Eastern		Solid			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
Level 1 radioactive

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Micha Kominkiewicz	Date/Time: AUG 20 2021 17:00	Company ETA SRL	Received by: [signature] Date/Time: 08/21/2021 1000 Company ETA DEN
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Page 21 of 135

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063223-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217894.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/1/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 15009147			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-060.03) Asbestos - PLM-EPA600-R-93/LAP-060.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-059-081821 (160-43124-1)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-259-081821 (160-43124-2)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-060-081821 (160-43124-3)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-260-081821 (160-43124-4)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-061-081821 (160-43124-5)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-261-081821 (160-43124-6)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-062-081821 (160-43124-7)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-063-081821 (160-43124-8)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-064-081821 (160-43124-9)	8/18/21	08:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kominsky	AUG 20 2021 17:00	ETA SL	Linda Maurer	08-23-2021	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063223-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217894.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/1/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: PA, 15146				
Phone:	PO #:			Other:
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUR (Asbestos - PLM-EPA600-R-93/LAP-080.03) / Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-065-081821 (160-43124-11)	8/18/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-066-081821 (160-43124-12)	8/18/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-066-081821 (160-43124-13)	8/18/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-067-081821 (160-43124-14)	8/18/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-068-081821 (160-43124-15)	8/18/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-069-081821 (160-43124-16)	8/18/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-070-081821 (160-43124-17)	8/18/21	09:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-071-081821 (160-43124-18)	8/18/21	09:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-072-081821 (160-43124-19)	8/18/21	09:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kominkiewicz	AUG 20 2021 17:00	ETA STL	Linda Mangus	08/23/2021	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217694.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/1/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-060.03) Asbestos - PLM-EPA600-R-93/LAP-060.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-073-081821 (160-43124-20)	8/18/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-074-081821 (160-43124-21)	8/18/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-075-081821 (160-43124-22)	8/18/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-076-081821 (160-43124-23)	8/18/21	10:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-077-081821 (160-43124-24)	8/18/21	10:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-078-081821 (160-43124-25)	8/18/21	10:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-079-081821 (160-43124-26)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-279-081821 (160-43124-27)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-080-081821 (160-43124-28)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Micha Kominsky	AUG 20 2021 17:00	EDA SR	Linda Mangum		RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH 106322 3-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217894.4
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43124-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/1/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: PA, 15146				
Phone:	PO #:			Other:
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-280-081821 (160-43124-29)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-081-081821 (160-43124-30)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-281-081821 (160-43124-31)	8/18/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Micha Kominkiewicz	Date/Time: AUG 20 2021 17:00	Company: EDA SR	Received by: Linda Mowgus	Date/Time: 08-20-2021	Company: RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43124-1

Login Number: 43124
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43124-1

Login Number: 43124
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 08/21/21 11:28 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43124-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43124-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-43124-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43124-1	FSS-059-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-2	FSS-259-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-3	FSS-060-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-4	FSS-260-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-5	FSS-061-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-6	FSS-261-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-7	FSS-062-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-8	FSS-063-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-9	FSS-064-081821	Solid	08/18/21 08:00	08/19/21 09:00
160-43124-10	HFBR-021-061821	Solid	06/18/21 10:00	08/19/21 09:00
160-43124-11	FSS-065-081821	Solid	08/18/21 09:30	08/19/21 09:00
160-43124-12	FSS-066-081821	Solid	08/18/21 09:30	08/19/21 09:00
160-43124-13	FSS-181-081821	Solid	08/18/21 09:30	08/19/21 09:00
160-43124-14	FSS-067-081821	Solid	08/18/21 09:00	08/19/21 09:00
160-43124-15	FSS-068-081821	Solid	08/18/21 09:00	08/19/21 09:00
160-43124-16	FSS-069-081821	Solid	08/18/21 09:00	08/19/21 09:00
160-43124-17	FSS-070-081821	Solid	08/18/21 09:45	08/19/21 09:00
160-43124-18	FSS-071-081821	Solid	08/18/21 09:45	08/19/21 09:00
160-43124-19	FSS-072-081821	Solid	08/18/21 09:45	08/19/21 09:00
160-43124-20	FSS-073-081821	Solid	08/18/21 10:30	08/19/21 09:00
160-43124-21	FSS-074-081821	Solid	08/18/21 10:30	08/19/21 09:00
160-43124-22	FSS-075-081821	Solid	08/18/21 10:30	08/19/21 09:00
160-43124-23	FSS-076-081821	Solid	08/18/21 10:45	08/19/21 09:00
160-43124-24	FSS-077-081821	Solid	08/18/21 10:45	08/19/21 09:00
160-43124-25	FSS-078-081821	Solid	08/18/21 10:45	08/19/21 09:00
160-43124-26	FSS-079-081821	Solid	08/18/21 11:00	08/19/21 09:00
160-43124-27	FSS-279-081821	Solid	08/18/21 11:00	08/19/21 09:00
160-43124-28	FSS-080-081821	Solid	08/18/21 11:00	08/19/21 09:00
160-43124-29	FSS-280-081821	Solid	08/18/21 11:00	08/19/21 09:00
160-43124-30	FSS-081-081821	Solid	08/18/21 11:00	08/19/21 09:00
160-43124-31	FSS-281-081821	Solid	08/18/21 11:00	08/19/21 09:00

Client Sample ID: FSS-059-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.377**	**J**	0.205	0.208	3.00	0.317	pCi/g	09/18/21 17:16	09/30/21 21:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.4*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0674	U	0.240	0.240	1.00	0.425	pCi/g	09/09/21 10:38	09/10/21 21:20	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0161	U	0.0119	0.0120	1.00	0.0724	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00230	U	0.00451	0.00452	1.00	0.0446	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*72.2*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0890	U	0.0924	0.0927	1.00	0.150	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	-0.00615	U	0.0391	0.0391	1.00	0.108	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.187**		0.0897	0.0910	1.00	0.0809	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.3*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0223	U	0.633	0.633	5.00	1.13	pCi/g	09/16/21 08:54	09/17/21 19:40	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.314**		0.0949	0.0999		0.0724	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Bismuth-212	0.270	U	0.691	0.692		1.21	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Bismuth-214	**0.199**		0.104	0.106		0.104	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Lead-212	**0.263**		0.0625	0.0708		0.0693	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Lead-214	**0.227**		0.0792	0.0826		0.0835	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Potassium-40	**3.95**		0.832	0.921		0.624	pCi/g	08/26/21 11:31	09/18/21 20:22	1

Client Sample ID: FSS-059-081821

Lab Sample ID: 160-43124-1
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.199**		0.104	0.106	1.00	0.104	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Thorium-232	**0.314**		0.0949	0.0999		0.0724	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Americium-241	0.0255	U	0.122	0.122		0.211	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Cesium-137	0.0141	U	0.0288	0.0288		0.0511	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Cobalt-60	-0.0548	U	0.0889	0.0890		0.0958	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Europium-152	0.000872	U	0.00156	0.00156		0.142	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Europium-154	0.0633	U	0.102	0.102		0.0970	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Europium-155	0.0227	U	0.0793	0.0794		0.427	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Sodium-22	-0.00619	U	0.0262	0.0262		0.0512	pCi/g	08/26/21 11:31	09/18/21 20:22	1
Zinc-65	-0.0236	U	0.115	0.115		0.206	pCi/g	08/26/21 11:31	09/18/21 20:22	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.08**		0.792	0.820	5.00	1.22	pCi/g	09/09/21 16:32	09/19/21 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*103*		*40 - 110*	*09/09/21 16:32*	*09/19/21 12:42*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	2.04	U	1.51	1.52	5.00	2.49	pCi/g	08/31/21 14:29	09/16/21 06:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*72.2*		*30 - 110*	*08/31/21 14:29*	*09/16/21 06:34*	*1*

Client Sample ID: FSS-059-081821

Lab Sample ID: 160-43124-1
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00
Percent Solids: 97.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.7**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 19:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/14/21 16:15	09/14/21 20:11	1

Client Sample ID: FSS-259-081821

Lab Sample ID: 160-43124-2
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.377**	**J**	0.175	0.177	3.00	0.257	pCi/g	09/18/21 17:16	09/30/21 21:41	1

Client Sample ID: FSS-259-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-2

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	81.6		40 - 110	09/18/21 17:16	09/30/21 21:41	1
Y Carrier	103		40 - 110	09/18/21 17:16	09/30/21 21:41	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.118	U	0.230	0.230	1.00	0.441	pCi/g	09/09/21 10:38	09/10/21 21:43	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0186	0.0186	1.00	0.0568	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	0.00639	U	0.0172	0.0172	1.00	0.0412	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	80.7		30 - 110	08/31/21 13:44	09/10/21 13:25	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.144**		0.0759	0.0768	1.00	0.0641	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	0.0179	U	0.0341	0.0342	1.00	0.0669	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.0863**		0.0564	0.0568	1.00	0.0288	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	69.1		30 - 110	08/31/21 14:27	09/10/21 13:46	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.153	U	0.653	0.654	5.00	1.18	pCi/g	09/16/21 08:54	09/17/21 20:47	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.280**		0.207	0.209		0.188	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Bismuth-212	0.000	U	0.260	0.260		0.914	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Bismuth-214	**0.217**		0.101	0.103		0.131	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Lead-212	**0.388**		0.0919	0.100		0.102	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Lead-214	**0.287**		0.0914	0.0958		0.122	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Potassium-40	**4.84**		1.02	1.12		0.410	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Radium-226	**0.217**		0.101	0.103	1.00	0.131	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Thorium-232	**0.280**		0.207	0.209		0.188	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Americium-241	0.0585	U	0.155	0.155		0.267	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Cesium-137	0.0284	U	0.0551	0.0552		0.0965	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Cobalt-60	-0.0777	U	0.128	0.128		0.138	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Europium-152	0.0577	U	0.295	0.295		0.514	pCi/g	08/26/21 11:31	09/18/21 20:21	1

Client Sample ID: FSS-259-081821

Lab Sample ID: 160-43124-2
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0690	U	0.0751	0.0754		0.0858	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Europium-155	0.0520	U	0.126	0.126		0.319	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Sodium-22	0.00178	U	0.0358	0.0358		0.0737	pCi/g	08/26/21 11:31	09/18/21 20:21	1
Zinc-65	0.000	U	0.0187	0.0187		0.289	pCi/g	08/26/21 11:31	09/18/21 20:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.84**		0.782	0.804	5.00	1.22	pCi/g	09/09/21 16:32	09/19/21 13:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/09/21 16:32*	*09/19/21 13:48*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.602	U	1.22	1.22	5.00	2.21	pCi/g	08/31/21 14:29	09/16/21 07:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*80.7*		*30 - 110*	*08/31/21 14:29*	*09/16/21 07:40*	*1*

Client Sample ID: FSS-259-081821

Lab Sample ID: 160-43124-2
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 94.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.8**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 19:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	6.0	ug/Kg	☼	09/14/21 16:15	09/14/21 20:13	1

Client Sample ID: FSS-060-081821

Lab Sample ID: 160-43124-3
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0823	U J	0.164	0.164	3.00	0.286	pCi/g	09/18/21 17:16	09/30/21 21:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.6*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*
Y Carrier	*101*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*

Client Sample ID: FSS-060-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-3

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.224	U	0.215	0.216	1.00	0.430	pCi/g	09/09/21 10:38	09/10/21 22:05	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0238	U	0.0436	0.0437	1.00	0.0831	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00264	U	0.00518	0.00519	1.00	0.0512	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*65.7*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.140**		0.0782	0.0791	1.00	0.0655	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	0.000	U	0.00646	0.00646	1.00	0.0396	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.193**		0.0908	0.0922	1.00	0.0654	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*62.5*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.159	U	0.650	0.650	5.00	1.18	pCi/g	09/16/21 08:54	09/17/21 21:10	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.270**		0.116	0.119		0.170	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Bismuth-212	-0.205	U	0.544	0.544		0.960	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Bismuth-214	**0.249**		0.0857	0.0894		0.0908	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Lead-212	**0.306**		0.0617	0.0729		0.0567	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Lead-214	**0.171**		0.0723	0.0744		0.145	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Potassium-40	**3.77**		0.812	0.896		0.619	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Radium-226	**0.249**		0.0857	0.0894	1.00	0.0908	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Thorium-232	**0.270**		0.116	0.119		0.170	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Americium-241	0.00392	U	0.120	0.120		0.209	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Cesium-137	0.00365	U	0.0397	0.0397		0.0730	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Cobalt-60	-0.0165	U	0.0611	0.0611		0.0703	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Europium-152	0.0524	U	0.114	0.114		0.128	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Europium-154	0.0593	U	0.0368	0.0373		0.0809	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Europium-155	-0.000885	U	0.140	0.140		0.383	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Sodium-22	-0.0515	U	0.0556	0.0559		0.0918	pCi/g	08/26/21 11:31	09/20/21 14:04	1
Zinc-65	-0.000963	U	0.0947	0.0947		0.177	pCi/g	08/26/21 11:31	09/20/21 14:04	1

Client Sample ID: FSS-060-081821

Lab Sample ID: 160-43124-3
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.52		0.832	0.871	5.00	1.26	pCi/g	09/09/21 16:32	09/19/21 16:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*114*	*Q*	*40 - 110*	*09/09/21 16:32*	*09/19/21 16:01*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.269	U	1.54	1.54	5.00	2.75	pCi/g	08/31/21 14:29	09/16/21 08:47	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*65.7*		*30 - 110*	*08/31/21 14:29*	*09/16/21 08:47*	*1*

Client Sample ID: FSS-060-081821

Lab Sample ID: 160-43124-3
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00
Percent Solids: 98.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.98		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 19:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 20:16	1

Client Sample ID: FSS-260-081821

Lab Sample ID: 160-43124-4
Matrix: Solid
Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.105	U J	0.163	0.163	3.00	0.281	pCi/g	09/18/21 17:16	09/30/21 21:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.3*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:42*	*1*
Y Carrier	*102*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:42*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.279	U	0.213	0.215	1.00	0.433	pCi/g	09/09/21 10:38	09/10/21 22:28	1

Client Sample ID: FSS-260-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-4

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0186	U	0.0387	0.0387	1.00	0.0753	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00414	U	0.00574	0.00575	1.00	0.0464	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.0*		*30 - 110*	*08/31/21 13:44*	*09/10/21 13:25*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.138**		0.0690	0.0699	1.00	0.0425	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	0.00820	U	0.0221	0.0221	1.00	0.0529	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.121**		0.0644	0.0652	1.00	0.0424	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.7*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0684	U	0.681	0.681	5.00	1.22	pCi/g	09/16/21 08:54	09/17/21 21:33	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.341**		0.119	0.124		0.0903	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Bismuth-212	-0.271	U	0.732	0.733		1.29	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Bismuth-214	**0.235**		0.0946	0.0975		0.103	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Lead-212	**0.272**		0.0669	0.0753		0.0658	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Lead-214	**0.292**		0.0967	0.101		0.0887	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Potassium-40	**3.38**		0.872	0.935		0.739	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Radium-226	**0.235**		0.0946	0.0975	1.00	0.103	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Thorium-232	**0.341**		0.119	0.124		0.0903	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Americium-241	-0.0583	U	0.150	0.151		0.258	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Cesium-137	0.0223	U	0.0378	0.0378		0.0656	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Cobalt-60	0.0205	U	0.0180	0.0181		0.0351	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Europium-152	0.0734	U	0.142	0.142		0.159	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Europium-154	0.0361	U	0.0498	0.0500		0.122	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Europium-155	-0.00465	U	0.120	0.120		0.335	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Sodium-22	0.0276	U	0.0221	0.0222		0.0339	pCi/g	08/26/21 11:31	09/18/21 20:25	1
Zinc-65	0.00371	U	0.124	0.124		0.230	pCi/g	08/26/21 11:31	09/18/21 20:25	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.81**		0.833	0.853	5.00	1.32	pCi/g	09/09/21 16:32	09/19/21 17:07	1

Client Sample ID: FSS-260-081821

Lab Sample ID: 160-43124-4
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	99.7		40 - 110	09/09/21 16:32	09/19/21 17:07	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.105	U	1.22	1.22	5.00	2.17	pCi/g	08/31/21 14:29	09/16/21 09:53	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	79.0		30 - 110	08/31/21 14:29	09/16/21 09:53	1

Client Sample ID: FSS-260-081821

Lab Sample ID: 160-43124-4
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 98.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.4		0.29	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 19:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 20:18	1

Client Sample ID: FSS-061-081821

Lab Sample ID: 160-43124-5
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.302	J	0.187	0.189	3.00	0.294	pCi/g	09/18/21 17:16	09/30/21 21:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.3		40 - 110	09/18/21 17:16	09/30/21 21:42	1
Y Carrier	101		40 - 110	09/18/21 17:16	09/30/21 21:42	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.150	U	0.232	0.232	1.00	0.452	pCi/g	09/09/21 10:38	09/10/21 22:51	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00612	U	0.0351	0.0351	1.00	0.0786	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00613	U	0.00693	0.00695	1.00	0.0505	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.9		30 - 110	08/31/21 13:44	09/10/21 13:25	1

Client Sample ID: FSS-061-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-5

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.119**		0.0707	0.0714	1.00	0.0662	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	0.000	U	0.00604	0.00604	1.00	0.0370	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	**0.178**		0.0822	0.0835	1.00	0.0297	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*71.5*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.333	U	0.711	0.712	5.00	1.23	pCi/g	09/16/21 08:54	09/17/21 21:55	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.322	U	0.119	0.123		0.364	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Bismuth-212	0.000	U	0.567	0.567		1.25	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Bismuth-214	**0.399**		0.132	0.138		0.130	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Lead-212	**0.425**		0.0954	0.105		0.106	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Lead-214	**0.381**		0.124	0.130		0.139	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Potassium-40	**4.78**		0.999	1.11		0.400	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Radium-226	**0.399**		0.132	0.138	1.00	0.130	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Thorium-232	0.322	U	0.119	0.123		0.364	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Americium-241	0.0217	U	0.171	0.171		0.297	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Cesium-137	-0.0392	U	0.0651	0.0652		0.112	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Cobalt-60	-0.0288	U	0.0869	0.0870		0.0992	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Europium-152	0.0943	U	0.205	0.206		0.172	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Europium-154	0.0296	U	0.0559	0.0560		0.0966	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Europium-155	-0.0983	U	0.333	0.333		0.569	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Sodium-22	0.0122	U	0.0378	0.0378		0.0719	pCi/g	08/26/21 11:31	09/20/21 14:03	1
Zinc-65	-0.0217	U	0.135	0.135		0.248	pCi/g	08/26/21 11:31	09/20/21 14:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.66**		0.808	0.825	5.00	1.29	pCi/g	09/09/21 16:32	09/19/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.3*		*40 - 110*	*09/09/21 16:32*	*09/19/21 18:13*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.587	U	1.17	1.17	5.00	2.01	pCi/g	08/31/21 14:29	09/16/21 10:59	1

Client Sample ID: FSS-061-081821
Lab Sample ID: 160-43124-5
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.9		30 - 110	08/31/21 14:29	09/16/21 10:59	1

Client Sample ID: FSS-061-081821
Lab Sample ID: 160-43124-5
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 98.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.6		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.7	ug/Kg	☼	09/14/21 16:15	09/14/21 20:21	1

Client Sample ID: FSS-261-081821
Lab Sample ID: 160-43124-6
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0776	U J	0.162	0.162	3.00	0.283	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	81.0		40 - 110	09/18/21 17:16	09/30/21 21:45	1
Y Carrier	102		40 - 110	09/18/21 17:16	09/30/21 21:45	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0241	U	0.244	0.244	1.00	0.444	pCi/g	09/09/21 10:38	09/10/21 23:13	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0175	U	0.0364	0.0364	1.00	0.0718	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.00219	U	0.00430	0.00430	1.00	0.0424	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.4		30 - 110	08/31/21 13:44	09/10/21 13:25	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.372		0.121	0.124	1.00	0.0783	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-235/236	-0.00297	U	0.00582	0.00583	1.00	0.0575	pCi/g	08/31/21 14:27	09/10/21 13:46	1
Uranium-238	0.248		0.0952	0.0974	1.00	0.0286	pCi/g	08/31/21 14:27	09/10/21 13:46	1

Client Sample ID: FSS-261-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-6

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	*72.3*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0957	U	0.671	0.672	5.00	1.21	pCi/g	09/16/21 08:54	09/17/21 22:18	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.440**		0.208	0.212		0.203	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Bismuth-212	**0.884**		0.328	0.340		0.233	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Bismuth-214	**0.210**		0.0948	0.0972		0.106	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Lead-212	**0.427**		0.0710	0.0893		0.0589	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Lead-214	**0.269**		0.0776	0.0823		0.0884	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Potassium-40	**5.21**		0.935	1.07		0.621	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Radium-226	**0.210**		0.0948	0.0972	1.00	0.106	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Thorium-232	**0.440**		0.208	0.212		0.203	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Americium-241	-0.0691	U	0.0724	0.0728		0.259	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Cesium-137	-0.0421	U	0.0679	0.0680		0.116	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Cobalt-60	-0.0128	U	0.0608	0.0608		0.0704	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Europium-152	**0.188**		0.111	0.113		0.0853	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Europium-154	0.00761	U	0.00884	0.00888		0.105	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Europium-155	0.0351	U	0.191	0.191		0.329	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Sodium-22	-0.0357	U	0.0537	0.0538		0.0920	pCi/g	08/26/21 11:31	09/18/21 21:07	1
Zinc-65	-0.0566	U	0.137	0.137		0.240	pCi/g	08/26/21 11:31	09/18/21 21:07	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.57**		0.793	0.809	5.00	1.27	pCi/g	09/09/21 16:32	09/19/21 19:19	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	*101*		*40 - 110*	*09/09/21 16:32*	*09/19/21 19:19*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.385	U	1.10	1.10	5.00	1.97	pCi/g	08/31/21 14:29	09/16/21 12:05	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	*92.4*		*30 - 110*	*08/31/21 14:29*	*09/16/21 12:05*	*1*

Client Sample ID: FSS-261-081821

Lab Sample ID: 160-43124-6
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.4**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/14/21 16:15	09/14/21 20:28	1

Client Sample ID: FSS-062-081821

Lab Sample ID: 160-43124-7
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0148	U J	0.190	0.190	3.00	0.345	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.0*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*89.7*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.108	U	0.234	0.235	1.00	0.450	pCi/g	09/09/21 10:38	09/10/21 23:36	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0231	0.0231	1.00	0.0612	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00187	U	0.00366	0.00366	1.00	0.0361	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*109*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.111**		0.0596	0.0603	1.00	0.0392	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	0.0101	U	0.0198	0.0198	1.00	0.0303	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	**0.115**		0.0618	0.0625	1.00	0.0501	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.3*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0797	U	0.554	0.554	5.00	0.939	pCi/g	09/17/21 06:21	09/18/21 06:42	1

Client Sample ID: FSS-062-081821

Lab Sample ID: 160-43124-7

Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.538**		0.161	0.169		0.188	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Bismuth-212	-0.342	U	0.817	0.818		1.44	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Bismuth-214	**0.254**		0.121	0.124		0.147	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Lead-212	**0.440**		0.0928	0.103		0.0932	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Lead-214	**0.298**		0.0878	0.0927		0.117	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Potassium-40	**1.49**		0.564	0.583		0.408	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Radium-226	**0.254**		0.121	0.124	1.00	0.147	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Thorium-232	**0.538**		0.161	0.169		0.188	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Americium-241	-0.0747	U	0.172	0.173		0.295	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Cesium-137	0.0346	U	0.0659	0.0660		0.115	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Cobalt-60	0.0264	U	0.0183	0.0185		0.0759	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Europium-152	0.0894	U	0.169	0.169		0.195	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Europium-154	0.0307	U	0.135	0.135		0.146	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Europium-155	-0.00302	U	0.00672	0.00673		0.598	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Sodium-22	-0.00709	U	0.0510	0.0510		0.0978	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Zinc-65	0.000	U	0.0263	0.0263		0.295	pCi/g	08/26/21 11:31	09/18/21 21:06	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.62**		0.748	0.766	5.00	1.18	pCi/g	09/09/21 16:32	09/19/21 20:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/09/21 16:32*	*09/19/21 20:25*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.88	U	1.31	1.32	5.00	2.09	pCi/g	09/05/21 20:15	09/28/21 16:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*109*		*30 - 110*	*09/05/21 20:15*	*09/28/21 16:17*	*1*

Client Sample ID: FSS-062-081821

Lab Sample ID: 160-43124-7

Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 98.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.68**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/14/21 16:15	09/14/21 20:39	1

Client Sample ID: FSS-063-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-8

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.180	U J	0.186	0.186	3.00	0.310	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.9*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*102*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.109	U	0.258	0.258	1.00	0.462	pCi/g	09/09/21 10:38	09/10/21 23:59	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0315	U	0.0154	0.0157	1.00	0.0816	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.000	U	0.0299	0.0299	1.00	0.0739	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.6*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.323**		0.0999	0.103	1.00	0.0551	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-235/236	0.0120	U	0.0279	0.0279	1.00	0.0596	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-238	**0.234**		0.0846	0.0867	1.00	0.0478	pCi/g	09/05/21 20:37	09/18/21 21:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*86.5*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:15*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.214	U	0.527	0.527	5.00	0.908	pCi/g	09/17/21 06:21	09/18/21 07:15	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.475**		0.151	0.158		0.0924	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Bismuth-212	0.503	U	1.04	1.04		1.79	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Bismuth-214	**0.289**		0.109	0.113		0.112	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Lead-212	**0.469**		0.0945	0.112		0.103	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Lead-214	**0.343**		0.0927	0.0991		0.0710	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Potassium-40	**1.48**		0.823	0.837		0.949	pCi/g	08/26/21 11:31	09/20/21 14:05	1

Client Sample ID: FSS-063-081821

Lab Sample ID: 160-43124-8
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.289**		0.109	0.113	1.00	0.112	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Thorium-232	**0.475**		0.151	0.158		0.0924	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Americium-241	-0.0653	U	0.173	0.173		0.297	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Cesium-137	**0.0803**		0.0324	0.0334		0.0247	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Cobalt-60	0.0131	U	0.0347	0.0347		0.0656	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Europium-152	0.0910	U	0.176	0.176		0.299	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Europium-154	0.0677	U	0.0892	0.0894		0.109	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Europium-155	0.0552	U	0.133	0.133		0.366	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Sodium-22	0.00784	U	0.0324	0.0324		0.0634	pCi/g	08/26/21 11:31	09/20/21 14:05	1
Zinc-65	-0.00467	U	0.102	0.102		0.224	pCi/g	08/26/21 11:31	09/20/21 14:05	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.39**		0.712	0.726	5.00	1.14	pCi/g	09/09/21 16:32	09/19/21 21:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*107*		*40 - 110*	*09/09/21 16:32*	*09/19/21 21:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.118	U	1.24	1.24	5.00	2.17	pCi/g	09/05/21 20:15	09/28/21 17:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.6*		*30 - 110*	*09/05/21 20:15*	*09/28/21 17:24*	*1*

Client Sample ID: FSS-063-081821

Lab Sample ID: 160-43124-8
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 97.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.80**		0.29	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 20:15	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/14/21 16:15	09/14/21 20:51	1

Client Sample ID: FSS-064-081821

Lab Sample ID: 160-43124-9
Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0370	U J	0.172	0.172	3.00	0.307	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Client Sample ID: FSS-064-081821

Date Collected: 08/18/21 08:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-9

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.8		40 - 110	09/18/21 17:16	09/30/21 21:45	1
Y Carrier	101		40 - 110	09/18/21 17:16	09/30/21 21:45	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.000	U	0.271	0.271	1.00	0.494	pCi/g	09/09/21 10:38	09/11/21 00:21	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0113	U	0.0215	0.0215	1.00	0.0421	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.0132	U	0.0212	0.0212	1.00	0.0364	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	98.5		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.399**		0.113	0.118	1.00	0.0543	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-235/236	0.0278	U	0.0347	0.0348	1.00	0.0490	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-238	**0.258**		0.0918	0.0942	1.00	0.0577	pCi/g	09/05/21 20:37	09/18/21 21:15	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	101		30 - 110	09/05/21 20:37	09/18/21 21:15	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.330	U	0.467	0.469	5.00	0.821	pCi/g	09/17/21 06:21	09/18/21 07:49	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.320**		0.209	0.212		0.294	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Bismuth-212	0.000	U	0.116	0.116		1.03	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Bismuth-214	**0.409**		0.106	0.114		0.0840	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Lead-212	**0.357**		0.0831	0.0946		0.0905	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Lead-214	**0.349**		0.0950	0.101		0.106	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Potassium-40	0.103	U	0.843	0.843		1.14	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Radium-226	**0.409**		0.106	0.114	1.00	0.0840	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Thorium-232	**0.320**		0.209	0.212		0.294	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Americium-241	0.0151	U	0.173	0.173		0.301	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Cesium-137	0.0333	U	0.0639	0.0640		0.111	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Cobalt-60	0.0250	U	0.0219	0.0221		0.0369	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Europium-152	**0.0876**		0.0696	0.0702		0.0858	pCi/g	08/26/21 11:31	09/18/21 21:06	1

Client Sample ID: FSS-064-081821

Lab Sample ID: 160-43124-9

Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0612	U	0.131	0.131		0.120	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Europium-155	0.0645	U	0.201	0.201		0.346	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Sodium-22	-0.0387	U	0.0599	0.0601		0.103	pCi/g	08/26/21 11:31	09/18/21 21:06	1
Zinc-65	-0.0420	U	0.0894	0.0895		0.277	pCi/g	08/26/21 11:31	09/18/21 21:06	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.24	U	0.763	0.774	5.00	1.25	pCi/g	09/09/21 16:32	09/19/21 22:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/09/21 16:32*	*09/19/21 22:38*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.90	U	1.46	1.47	5.00	2.35	pCi/g	09/05/21 20:15	09/28/21 17:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*98.5*		*30 - 110*	*09/05/21 20:15*	*09/28/21 17:58*	*1*

Client Sample ID: FSS-064-081821

Lab Sample ID: 160-43124-9

Date Collected: 08/18/21 08:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 95.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.99		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 20:59	1

Client Sample ID: HFBR-021-061821

Lab Sample ID: 160-43124-10

Date Collected: 06/18/21 10:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0245	U J	0.147	0.148	3.00	0.276	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.3*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*100*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43124-1

Client Sample ID: HFBR-021-061821

Date Collected: 06/18/21 10:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-10

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0843	U	0.243	0.243	1.00	0.429	pCi/g	09/09/21 10:38	09/11/21 00:44	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00390	U	0.00541	0.00542	1.00	0.0437	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00781	U	0.0230	0.0230	1.00	0.0522	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.243**		0.0905	0.0927	1.00	0.0619	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-235/236	0.0179	U	0.0289	0.0289	1.00	0.0496	pCi/g	09/05/21 20:37	09/18/21 21:15	1
Uranium-238	**0.278**		0.0958	0.0985	1.00	0.0585	pCi/g	09/05/21 20:37	09/18/21 21:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*96.7*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:15*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.494	U	0.525	0.528	5.00	0.934	pCi/g	09/17/21 06:21	09/18/21 08:22	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.347**		0.153	0.157		0.134	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Bismuth-212	0.318	U	0.497	0.498		0.853	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Bismuth-214	**0.430**		0.113	0.121		0.130	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Lead-212	**0.381**		0.0723	0.0869		0.0707	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Lead-214	**0.404**		0.0933	0.102		0.0776	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Potassium-40	**6.05**		1.02	1.19		0.649	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Radium-226	**0.430**		0.113	0.121	1.00	0.130	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Thorium-232	**0.347**		0.153	0.157		0.134	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Americium-241	-0.0647	U	0.0767	0.0770		0.232	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Cesium-137	0.0328	U	0.0569	0.0570		0.0979	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Cobalt-60	0.00416	U	0.0152	0.0152		0.0552	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Europium-152	0.132	U	0.0628	0.0642		0.165	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Europium-154	0.0219	U	0.0446	0.0446		0.0980	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Europium-155	-0.000927	U	0.0903	0.0903		0.421	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Sodium-22	0.0270	U	0.0324	0.0325		0.0533	pCi/g	08/26/21 11:31	09/19/21 20:59	1
Zinc-65	0.0453	U	0.0942	0.0943		0.166	pCi/g	08/26/21 11:31	09/19/21 20:59	1

Client Sample ID: HFBR-021-061821

Lab Sample ID: 160-43124-10
Matrix: Solid
Date Collected: 06/18/21 10:00
Date Received: 08/19/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.85**		0.763	0.786	5.00	1.19	pCi/g	09/09/21 16:32	09/19/21 23:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*110*		*40 - 110*	*09/09/21 16:32*	*09/19/21 23:44*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.752	U	1.31	1.31	5.00	2.20	pCi/g	09/05/21 20:15	09/28/21 18:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/05/21 20:15*	*09/28/21 18:32*	*1*

Client Sample ID: FSS-065-081821

Lab Sample ID: 160-43124-11
Matrix: Solid
Date Collected: 08/18/21 09:30
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.150	U J	0.171	0.171	3.00	0.287	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.0*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0304	U	0.246	0.246	1.00	0.446	pCi/g	09/09/21 10:38	09/11/21 01:07	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0137	U	0.0279	0.0280	1.00	0.0557	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00784	U	0.0154	0.0154	1.00	0.0235	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.3*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.123**		0.0694	0.0701	1.00	0.0784	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	-0.00247	U	0.0222	0.0222	1.00	0.0702	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Client Sample ID: FSS-065-081821

Date Collected: 08/18/21 09:30
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-11

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-238	**0.156**		0.0695	0.0707	1.00	0.0383	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.9*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.184	U	0.499	0.499	5.00	0.858	pCi/g	09/17/21 06:21	09/18/21 08:56	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.391**		0.137	0.142		0.169	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Bismuth-212	0.294	U	0.845	0.845		1.49	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Bismuth-214	**0.254**		0.125	0.127		0.139	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Lead-212	**0.221**		0.0754	0.0787		0.0985	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Lead-214	**0.284**		0.0842	0.0889		0.106	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Potassium-40	**4.43**		0.921	1.02		0.367	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Radium-226	**0.254**		0.125	0.127	1.00	0.139	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Thorium-232	**0.391**		0.137	0.142		0.169	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Americium-241	-0.0661	U	0.169	0.169		0.289	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Cesium-137	**0.135**		0.0425	0.0446		0.0256	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Cobalt-60	0.00513	U	0.00318	0.00322		0.108	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Europium-152	0.0238	U	0.0446	0.0447		0.154	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Europium-154	0.0584	U	0.0832	0.0835		0.0942	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Europium-155	-0.0826	U	0.286	0.286		0.489	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Sodium-22	0.0303	U	0.0394	0.0395		0.0660	pCi/g	08/26/21 11:31	09/19/21 21:01	1
Zinc-65	0.000	U	0.0473	0.0473		0.222	pCi/g	08/26/21 11:31	09/19/21 21:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.42**		0.784	0.797	5.00	1.26	pCi/g	09/09/21 16:32	09/20/21 00:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*103*		*40 - 110*	*09/09/21 16:32*	*09/20/21 00:50*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.19	U	1.45	1.45	5.00	2.40	pCi/g	09/05/21 20:15	09/28/21 19:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.3*		*30 - 110*	*09/05/21 20:15*	*09/28/21 19:05*	*1*

Client Sample ID: FSS-065-081821

Lab Sample ID: 160-43124-11
Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**12**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 20:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/14/21 16:15	09/14/21 21:01	1

Client Sample ID: FSS-066-081821

Lab Sample ID: 160-43124-12
Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.139	U J	0.193	0.193	3.00	0.328	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.7*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*99.4*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.000	U	0.234	0.234	1.00	0.426	pCi/g	09/09/21 10:38	09/11/21 01:29	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00396	U	0.0296	0.0296	1.00	0.0698	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00396	U	0.0182	0.0182	1.00	0.0595	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.8*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.176**		0.0741	0.0755	1.00	0.0563	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	-0.00234	U	0.00458	0.00458	1.00	0.0452	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	**0.249**		0.0859	0.0883	1.00	0.0463	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.2*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.359	U	0.591	0.592	5.00	1.03	pCi/g	09/17/21 06:21	09/18/21 09:29	1

Client Sample ID: FSS-066-081821

Lab Sample ID: 160-43124-12

Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.327**		0.101	0.106		0.0723	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Bismuth-212	-0.169	U	0.623	0.623		1.11	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Bismuth-214	**0.278**		0.0975	0.102		0.0968	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Lead-212	**0.220**		0.0599	0.0661		0.0713	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Lead-214	**0.250**		0.0866	0.0903		0.113	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Potassium-40	**4.61**		0.888	1.00		0.623	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Radium-226	**0.278**		0.0975	0.102	1.00	0.0968	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Thorium-232	**0.327**		0.101	0.106		0.0723	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Americium-241	0.00650	U	0.117	0.117		0.204	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Cesium-137	0.0199	U	0.0347	0.0348		0.0604	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Cobalt-60	-0.0128	U	0.0610	0.0610		0.0707	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Europium-152	0.0349	U	0.0397	0.0399		0.141	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Europium-154	0.0495	U	0.0891	0.0892		0.104	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Europium-155	0.0198	U	0.0709	0.0709		0.355	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Sodium-22	0.00865	U	0.0269	0.0269		0.0512	pCi/g	08/26/21 11:31	09/19/21 21:33	1
Zinc-65	0.00000000628	U	0.111	0.111		0.205	pCi/g	08/26/21 11:31	09/19/21 21:33	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.59**		0.750	0.767	5.00	1.19	pCi/g	09/09/21 16:32	09/20/21 01:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*107*		*40 - 110*	*09/09/21 16:32*	*09/20/21 01:56*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.43	U	1.38	1.38	5.00	2.25	pCi/g	09/05/21 20:15	09/28/21 19:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.8*		*30 - 110*	*09/05/21 20:15*	*09/28/21 19:39*	*1*

Client Sample ID: FSS-066-081821

Lab Sample ID: 160-43124-12

Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**9.2**		0.29	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 20:26	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/14/21 16:15	09/14/21 21:04	1

Client Sample ID: FSS-181-081821

Date Collected: 08/18/21 09:30
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-13

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.182	U J	0.167	0.168	3.00	0.275	pCi/g	09/18/21 17:16	09/30/21 21:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.4*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*
Y Carrier	*99.1*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.128	U	0.228	0.229	1.00	0.438	pCi/g	09/09/21 10:38	09/11/21 01:52	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0336	U	0.0235	0.0237	1.00	0.0902	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00988	U	0.0194	0.0194	1.00	0.0673	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.234**		0.0828	0.0850	1.00	0.0541	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	0.00672	U	0.0181	0.0181	1.00	0.0434	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	**0.180**		0.0722	0.0737	1.00	0.0480	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*94.3*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.595	U	0.545	0.548	5.00	0.975	pCi/g	09/17/21 06:21	09/18/21 10:03	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.177	U	0.234	0.235		0.352	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Bismuth-212	0.237	U	0.479	0.480		0.851	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Bismuth-214	**0.310**		0.114	0.118		0.128	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Lead-212	**0.445**		0.117	0.126		0.159	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Lead-214	**0.322**		0.0882	0.0938		0.105	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Potassium-40	**4.72**		0.975	1.08		0.386	pCi/g	08/26/21 11:31	09/19/21 21:32	1

Client Sample ID: FSS-181-081821

Lab Sample ID: 160-43124-13
Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.310**		0.114	0.118	1.00	0.128	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Thorium-232	0.177	U	0.234	0.235		0.352	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Americium-241	0.0459	U	0.171	0.171		0.294	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Cesium-137	0.0262	U	0.0627	0.0628		0.110	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Cobalt-60	0.0313	U	0.0164	0.0167		0.0718	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Europium-152	0.0770	U	0.0801	0.0805		0.193	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Europium-154	0.0710	U	0.0881	0.0884		0.130	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Europium-155	0.0781	U	0.288	0.288		0.493	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Sodium-22	0.00671	U	0.0351	0.0351		0.0694	pCi/g	08/26/21 11:31	09/19/21 21:32	1
Zinc-65	-0.164	U	0.256	0.256		0.435	pCi/g	08/26/21 11:31	09/19/21 21:32	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.82**		0.784	0.806	5.00	1.24	pCi/g	09/09/21 16:32	09/20/21 03:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*09/09/21 16:32*	*09/20/21 03:03*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.136	U	1.25	1.25	5.00	2.22	pCi/g	09/05/21 20:15	09/28/21 20:12	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/05/21 20:15*	*09/28/21 20:12*	*1*

Client Sample ID: FSS-181-081821

Lab Sample ID: 160-43124-13
Date Collected: 08/18/21 09:30
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.9**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/14/21 16:15	09/14/21 21:07	1

Client Sample ID: FSS-067-081821

Lab Sample ID: 160-43124-14
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.407**	**J**	0.229	0.231	3.00	0.356	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Client Sample ID: FSS-067-081821

Date Collected: 08/18/21 09:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-14

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	77.9		40 - 110	09/18/21 17:16	09/30/21 21:46	1
Y Carrier	95.3		40 - 110	09/18/21 17:16	09/30/21 21:46	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.154	U	0.214	0.214	1.00	0.413	pCi/g	09/09/21 10:38	09/11/21 02:15	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00421	U	0.0193	0.0193	1.00	0.0632	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.0400	U	0.0372	0.0373	1.00	0.0408	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	102		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.230**		0.0839	0.0860	1.00	0.0437	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	**0.0291**		0.0329	0.0330	1.00	0.0291	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	**0.195**		0.0763	0.0779	1.00	0.0233	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	88.4		30 - 110	09/05/21 20:37	09/18/21 21:14	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.258	U	0.527	0.528	5.00	0.912	pCi/g	09/17/21 06:21	09/18/21 10:36	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.372**		0.154	0.158		0.132	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Bismuth-212	0.142	U	0.536	0.537		0.961	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Bismuth-214	**0.266**		0.0940	0.0978		0.104	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Lead-212	**0.413**		0.0727	0.0896		0.0659	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Lead-214	**0.304**		0.0778	0.0837		0.101	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Potassium-40	**5.27**		0.955	1.09		0.638	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Radium-226	**0.266**		0.0940	0.0978	1.00	0.104	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Thorium-232	**0.372**		0.154	0.158		0.132	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Americium-241	0.0529	U	0.117	0.117		0.200	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Cesium-137	**0.193**		0.0481	0.0520		0.0289	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Cobalt-60	-0.00262	U	0.0435	0.0435		0.0543	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Europium-152	0.0710	U	0.110	0.111		0.148	pCi/g	08/26/21 11:31	09/19/21 22:12	1

Client Sample ID: FSS-067-081821

Lab Sample ID: 160-43124-14
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	-0.0147	U	0.0563	0.0563		0.0982	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Europium-155	0.0166	U	0.0985	0.0985		0.400	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Sodium-22	-0.0190	U	0.0465	0.0465		0.0832	pCi/g	08/26/21 11:31	09/19/21 22:12	1
Zinc-65	0.0271	U	0.109	0.109		0.196	pCi/g	08/26/21 11:31	09/19/21 22:12	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.38**		0.735	0.749	5.00	1.18	pCi/g	09/09/21 16:32	09/20/21 04:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*106*		*40 - 110*	*09/09/21 16:32*	*09/20/21 04:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.741	U	1.31	1.31	5.00	2.22	pCi/g	09/05/21 20:15	09/28/21 20:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*102*		*30 - 110*	*09/05/21 20:15*	*09/28/21 20:46*	*1*

Client Sample ID: FSS-067-081821

Lab Sample ID: 160-43124-14
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 97.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.5**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 21:09	1

Client Sample ID: FSS-068-081821

Lab Sample ID: 160-43124-15
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.00626	U J	0.195	0.195	3.00	0.358	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*65.6*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*

Client Sample ID: FSS-068-081821

Date Collected: 08/18/21 09:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-15

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.000	U	0.243	0.243	1.00	0.446	pCi/g	09/09/21 10:38	09/11/21 02:37	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00590	U	0.0235	0.0235	1.00	0.0560	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00985	U	0.0228	0.0229	1.00	0.0487	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.5*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.175**		0.0749	0.0763	1.00	0.0455	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	0.0202	U	0.0280	0.0281	1.00	0.0303	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	**0.162**		0.0711	0.0723	1.00	0.0243	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.6*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0611	U	0.530	0.530	5.00	0.897	pCi/g	09/17/21 06:21	09/18/21 11:10	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.282**		0.211	0.213		0.224	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Bismuth-212	-0.293	U	0.808	0.809		1.42	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Bismuth-214	0.0594	U	0.121	0.121		0.369	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Lead-212	**0.286**		0.0756	0.0810		0.0855	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Lead-214	**0.271**		0.0948	0.0986		0.103	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Potassium-40	**3.83**		0.856	0.936		0.367	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Radium-226	0.0594	U	0.121	0.121	1.00	0.369	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Thorium-232	**0.282**		0.211	0.213		0.224	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Americium-241	-0.0743	U	0.166	0.166		0.284	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Cesium-137	**0.117**		0.0526	0.0539		0.0500	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Cobalt-60	0.0355	U	0.0180	0.0183		0.0364	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Europium-152	0.0957	U	0.0689	0.0696		0.143	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Europium-154	0.114	U	0.0543	0.0556		0.122	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Europium-155	0.000	U	0.0889	0.0889		0.466	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Sodium-22	-0.0191	U	0.0577	0.0577		0.105	pCi/g	08/26/21 11:31	09/19/21 22:14	1
Zinc-65	-0.0780	U	0.166	0.166		0.289	pCi/g	08/26/21 11:31	09/19/21 22:14	1

Client Sample ID: FSS-068-081821
Lab Sample ID: 160-43124-15
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.70		0.777	0.796	5.00	1.23	pCi/g	09/09/21 16:32	09/20/21 05:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*09/09/21 16:32*	*09/20/21 05:15*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.05	U	1.43	1.43	5.00	2.38	pCi/g	09/05/21 20:15	09/28/21 21:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.5*		*30 - 110*	*09/05/21 20:15*	*09/28/21 21:19*	*1*

Client Sample ID: FSS-068-081821
Lab Sample ID: 160-43124-15
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 94.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	12		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 20:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 21:12	1

Client Sample ID: FSS-069-081821
Lab Sample ID: 160-43124-16
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.170	U J	0.185	0.186	3.00	0.311	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.1*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*
Y Carrier	*97.6*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0850	U	0.240	0.241	1.00	0.461	pCi/g	09/09/21 10:38	09/11/21 03:00	1

Client Sample ID: FSS-069-081821

Date Collected: 08/18/21 09:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-16

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0108	U	0.0131	0.0131	1.00	0.0201	pCi/g	09/05/21 16:27	09/20/21 11:29	1
Plutonium-239/240	0.00120	U	0.00738	0.00738	1.00	0.0202	pCi/g	09/05/21 16:27	09/20/21 11:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.9*		*30 - 110*	*09/05/21 16:27*	*09/20/21 11:29*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.258**		0.0916	0.0940	1.00	0.0406	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0287	U	0.0358	0.0359	1.00	0.0505	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.190**		0.0809	0.0824	1.00	0.0595	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.0*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.528	U	0.717	0.719	5.00	1.22	pCi/g	09/20/21 09:08	09/21/21 10:59	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.259	U	0.112	0.115		0.261	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Bismuth-212	0.142	U	0.512	0.512		0.919	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Bismuth-214	**0.341**		0.104	0.109		0.0957	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Lead-212	**0.317**		0.0692	0.0800		0.0760	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Lead-214	**0.322**		0.0816	0.0879		0.0719	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Potassium-40	**4.43**		0.884	0.989		0.636	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Radium-226	**0.341**		0.104	0.109	1.00	0.0957	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Thorium-232	0.259	U	0.112	0.115		0.261	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Americium-241	-0.0709	U	0.0544	0.0548		0.265	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Cesium-137	**0.135**		0.0403	0.0426		0.0269	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Cobalt-60	0.0154	U	0.0293	0.0293		0.0542	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Europium-152	0.0415	U	0.0495	0.0496		0.151	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Europium-154	**0.0976**		0.0428	0.0439		0.0969	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Europium-155	-0.000909	U	0.0646	0.0646		0.231	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Sodium-22	-0.00505	U	0.0364	0.0364		0.0697	pCi/g	08/26/21 11:31	09/19/21 22:44	1
Zinc-65	0.0461	U	0.113	0.113		0.199	pCi/g	08/26/21 11:31	09/19/21 22:44	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.54**		0.758	0.774	5.00	1.21	pCi/g	09/09/21 16:32	09/20/21 06:21	1

Client Sample ID: FSS-069-081821

Lab Sample ID: 160-43124-16
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	107		40 - 110	09/09/21 16:32	09/20/21 06:21	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.0507	U	1.42	1.42	5.00	2.52	pCi/g	09/05/21 20:15	09/28/21 21:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	87.9		30 - 110	09/05/21 20:15	09/28/21 21:54	1

Client Sample ID: FSS-069-081821

Lab Sample ID: 160-43124-16
Date Collected: 08/18/21 09:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 95.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.9		0.31	0.019	mg/Kg	☼	09/12/21 07:16	09/13/21 20:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.6	ug/Kg	☼	09/14/21 16:15	09/14/21 21:14	1

Client Sample ID: FSS-070-081821

Lab Sample ID: 160-43124-17
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.113	U J	0.176	0.176	3.00	0.303	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.5		40 - 110	09/18/21 17:16	09/30/21 21:46	1
Y Carrier	96.8		40 - 110	09/18/21 17:16	09/30/21 21:46	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0423	U	0.235	0.235	1.00	0.420	pCi/g	09/09/21 10:38	09/11/21 03:22	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00169	U	0.00332	0.00332	1.00	0.0328	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.0119	U	0.0191	0.0191	1.00	0.0328	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	98.2		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Client Sample ID: FSS-070-081821

Date Collected: 08/18/21 09:45
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-17

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.195**		0.0789	0.0805	1.00	0.0496	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0200	U	0.0277	0.0277	1.00	0.0299	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.214**		0.0816	0.0835	1.00	0.0387	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.5*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0631	U	0.503	0.503	5.00	0.890	pCi/g	09/20/21 09:08	09/21/21 12:07	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.463**		0.269	0.273		0.275	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Bismuth-212	0.000	U	0.508	0.508		1.22	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Bismuth-214	**0.424**		0.123	0.130		0.120	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Lead-212	**0.476**		0.0957	0.107		0.102	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Lead-214	**0.321**		0.0951	0.100		0.132	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Potassium-40	**4.41**		0.932	1.03		0.378	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Radium-226	**0.424**		0.123	0.130	1.00	0.120	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Thorium-232	**0.463**		0.269	0.273		0.275	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Americium-241	-0.0401	U	0.164	0.164		0.283	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Cesium-137	0.00872	U	0.0746	0.0746		0.134	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Cobalt-60	0.0111	U	0.0191	0.0192		0.0703	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Europium-152	0.0406	U	0.0503	0.0505		0.200	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Europium-154	0.0975	U	0.100	0.101		0.118	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Europium-155	-0.0958	U	0.339	0.339		0.579	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Sodium-22	-0.0312	U	0.0520	0.0520		0.0906	pCi/g	08/26/21 11:31	09/19/21 22:45	1
Zinc-65	0.000	U	0.0244	0.0244		0.190	pCi/g	08/26/21 11:31	09/19/21 22:45	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.47**		0.758	0.799	5.00	1.13	pCi/g	09/09/21 16:32	09/20/21 07:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*111*	*Q*	*40 - 110*	*09/09/21 16:32*	*09/20/21 07:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.207	U	1.19	1.19	5.00	2.06	pCi/g	09/05/21 20:15	09/28/21 22:27	1

Client Sample ID: FSS-070-081821
Lab Sample ID: 160-43124-17
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	98.2		30 - 110	09/05/21 20:15	09/28/21 22:27	1

Client Sample ID: FSS-070-081821
Lab Sample ID: 160-43124-17
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.1		0.31	0.019	mg/Kg	☼	09/12/21 07:16	09/13/21 20:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/14/21 16:15	09/14/21 21:17	1

Client Sample ID: FSS-071-081821
Lab Sample ID: 160-43124-18
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.275	J	0.171	0.172	3.00	0.266	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.1		40 - 110	09/18/21 17:16	09/30/21 21:46	1
Y Carrier	101		40 - 110	09/18/21 17:16	09/30/21 21:46	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00604	U	0.248	0.248	1.00	0.461	pCi/g	09/09/21 10:38	09/11/21 03:45	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00188	U	0.00369	0.00369	1.00	0.0364	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.000	U	0.00369	0.00369	1.00	0.0226	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	91.5		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.135		0.0634	0.0644	1.00	0.0457	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0345	U	0.0363	0.0364	1.00	0.0445	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	0.188		0.0739	0.0755	1.00	0.0413	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Client Sample ID: FSS-071-081821

Date Collected: 08/18/21 09:45
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-18

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	89.3		30 - 110	09/05/21 20:37	09/18/21 21:20	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0295	U	0.700	0.700	5.00	1.25	pCi/g	09/20/21 09:08	09/21/21 12:30	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.196**		0.147	0.148		0.182	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Bismuth-212	-0.419	U	0.709	0.711		1.22	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Bismuth-214	**0.369**		0.109	0.115		0.101	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Lead-212	**0.368**		0.0690	0.0834		0.0607	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Lead-214	**0.340**		0.0848	0.0916		0.0871	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Potassium-40	**2.96**		0.764	0.819		0.662	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Radium-226	**0.369**		0.109	0.115	1.00	0.101	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Thorium-232	**0.196**		0.147	0.148		0.182	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Americium-241	-0.0350	U	0.0286	0.0288		0.158	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Cesium-137	0.0205	U	0.0501	0.0501		0.0880	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Cobalt-60	**0.0490**		0.0277	0.0281		0.0301	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Europium-152	0.0533	U	0.107	0.107		0.144	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Europium-154	-0.00298	U	0.0519	0.0519		0.0923	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Europium-155	-0.000946	U	0.0358	0.0358		0.455	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Sodium-22	-0.0171	U	0.0401	0.0402		0.0725	pCi/g	08/26/21 11:31	09/19/21 23:15	1
Zinc-65	0.0145	U	0.111	0.111		0.203	pCi/g	08/26/21 11:31	09/19/21 23:15	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.34**		0.726	0.739	5.00	1.17	pCi/g	09/09/21 16:32	09/20/21 08:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	104		40 - 110	09/09/21 16:32	09/20/21 08:34	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.605	U	1.39	1.39	5.00	2.39	pCi/g	09/05/21 20:15	09/28/21 23:01	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	91.5		30 - 110	09/05/21 20:15	09/28/21 23:01	1

Client Sample ID: FSS-071-081821

Lab Sample ID: 160-43124-18
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 98.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.6**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 20:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/14/21 16:15	09/14/21 21:19	1

Client Sample ID: FSS-072-081821

Lab Sample ID: 160-43124-19
Date Collected: 08/18/21 09:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.106	U J	0.162	0.162	3.00	0.277	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.6*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*
Y Carrier	*102*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.151	U	0.225	0.225	1.00	0.434	pCi/g	09/09/21 10:38	09/11/21 04:08	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0202	U	0.0201	0.0201	1.00	0.0745	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.0331	U	0.0153	0.0155	1.00	0.0795	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.7*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.226**		0.0852	0.0872	1.00	0.0709	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.00229	U	0.0196	0.0196	1.00	0.0567	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.237**		0.0845	0.0868	1.00	0.0578	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.3*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0298	U	0.624	0.624	5.00	1.12	pCi/g	09/20/21 09:08	09/21/21 12:52	1

Client Sample ID: FSS-072-081821

Lab Sample ID: 160-43124-19

Date Collected: 08/18/21 09:45

Matrix: Solid

Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.355**		0.110	0.115		0.293	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Bismuth-212	0.495	U	0.902	0.903		1.56	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Bismuth-214	**0.458**		0.125	0.133		0.116	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Lead-212	**0.406**		0.0957	0.104		0.110	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Lead-214	**0.386**		0.0993	0.106		0.143	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Potassium-40	**4.16**		0.935	1.02		0.403	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Radium-226	**0.458**		0.125	0.133	1.00	0.116	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Thorium-232	**0.355**		0.110	0.115		0.293	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Americium-241	0.0607	U	0.168	0.168		0.289	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Cesium-137	0.0197	U	0.0412	0.0412		0.0734	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Cobalt-60	-0.0181	U	0.0863	0.0863		0.0999	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Europium-152	-0.0139	U	0.0284	0.0284		0.205	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Europium-154	-0.0141	U	0.0294	0.0294		0.140	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Europium-155	0.0667	U	0.118	0.118		0.274	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Sodium-22	0.0140	U	0.0518	0.0518		0.0966	pCi/g	08/26/21 11:31	09/19/21 23:53	1
Zinc-65	-0.0581	U	0.188	0.188		0.332	pCi/g	08/26/21 11:31	09/19/21 23:53	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.10	U	0.724	0.733	5.00	1.18	pCi/g	09/09/21 16:32	09/20/21 09:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/09/21 16:32*	*09/20/21 09:40*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.400	U	1.40	1.40	5.00	2.46	pCi/g	09/05/21 20:15	09/28/21 23:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.7*		*30 - 110*	*09/05/21 20:15*	*09/28/21 23:34*	*1*

Client Sample ID: FSS-072-081821

Lab Sample ID: 160-43124-19

Date Collected: 08/18/21 09:45

Matrix: Solid

Date Received: 08/19/21 09:00

Percent Solids: 97.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.8**		0.29	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 20:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 21:22	1

Client Sample ID: FSS-073-081821

Date Collected: 08/18/21 10:30
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-20

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.00750	U J	0.167	0.167	3.00	0.310	pCi/g	09/18/21 17:16	09/30/21 21:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*67.7*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:46*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0689	U	0.238	0.238	1.00	0.421	pCi/g	09/09/21 10:43	09/11/21 11:32	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00386	U	0.00535	0.00536	1.00	0.0432	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00386	U	0.00535	0.00536	1.00	0.0433	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.0*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.105**		0.0645	0.0651	1.00	0.0754	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0200	U	0.0278	0.0278	1.00	0.0300	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.249**		0.0894	0.0917	1.00	0.0536	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.8*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0847	U	0.728	0.729	5.00	1.31	pCi/g	09/20/21 09:08	09/21/21 13:15	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.576**		0.172	0.181		0.105	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Bismuth-212	**0.834**		0.385	0.394		0.341	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Bismuth-214	**0.428**		0.149	0.155		0.158	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Lead-212	**0.424**		0.0986	0.108		0.114	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Lead-214	**0.439**		0.109	0.118		0.124	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Potassium-40	**5.61**		1.09	1.22		0.406	pCi/g	08/26/21 11:31	09/19/21 23:16	1

Client Sample ID: FSS-073-081821

Lab Sample ID: 160-43124-20

Date Collected: 08/18/21 10:30

Matrix: Solid

Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.428**		0.149	0.155	1.00	0.158	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Thorium-232	**0.576**		0.172	0.181		0.105	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Americium-241	0.0742	U	0.168	0.168		0.288	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Cesium-137	0.0344	U	0.0627	0.0628		0.109	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Cobalt-60	**0.0546**		0.0234	0.0240		0.0403	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Europium-152	0.116	U	0.161	0.162		0.193	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Europium-154	0.0763	U	0.110	0.110		0.145	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Europium-155	0.00000000100	U	0.254	0.254		0.441	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Sodium-22	-0.0475	U	0.0679	0.0680		0.116	pCi/g	08/26/21 11:31	09/19/21 23:16	1
Zinc-65	0.000	U	0.0185	0.0185		0.262	pCi/g	08/26/21 11:31	09/19/21 23:16	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.22	U	0.764	0.774	5.00	1.24	pCi/g	09/09/21 16:32	09/20/21 10:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.9*		*40 - 110*	*09/09/21 16:32*	*09/20/21 10:46*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.319	U	1.33	1.33	5.00	2.39	pCi/g	09/05/21 20:15	09/29/21 00:08	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.0*		*30 - 110*	*09/05/21 20:15*	*09/29/21 00:08*	*1*

Client Sample ID: FSS-073-081821

Lab Sample ID: 160-43124-20

Date Collected: 08/18/21 10:30

Matrix: Solid

Date Received: 08/19/21 09:00

Percent Solids: 98.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.3**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 21:01	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/14/21 16:15	09/14/21 21:29	1

Client Sample ID: FSS-074-081821

Date Collected: 08/18/21 10:30
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-21

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0339	U	0.177	0.177	3.00	0.317	pCi/g	09/18/21 16:37	09/30/21 21:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0955	U	0.219	0.219	1.00	0.375	pCi/g	09/09/21 10:43	09/11/21 11:55	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00377	0.00377	1.00	0.0231	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.000	U	0.00377	0.00377	1.00	0.0231	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.3*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.257**		0.0900	0.0924	1.00	0.0493	pCi/g	09/05/21 20:37	09/20/21 20:54	1
Uranium-235/236	0.0173	U	0.0279	0.0279	1.00	0.0480	pCi/g	09/05/21 20:37	09/20/21 20:54	1
Uranium-238	**0.203**		0.0797	0.0814	1.00	0.0445	pCi/g	09/05/21 20:37	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.3*		*30 - 110*	*09/05/21 20:37*	*09/20/21 20:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.235	U	0.571	0.571	5.00	0.994	pCi/g	09/20/21 09:08	09/21/21 13:38	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.272**		0.141	0.144		0.132	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Bismuth-212	0.159	U	0.882	0.882		1.55	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Bismuth-214	**0.261**		0.0897	0.0936		0.0944	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Lead-212	**0.387**		0.0692	0.0848		0.0592	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Lead-214	**0.279**		0.108	0.112		0.106	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Potassium-40	**4.22**		0.869	0.966		0.640	pCi/g	08/26/21 12:50	09/18/21 09:43	1

Client Sample ID: FSS-074-081821

Lab Sample ID: 160-43124-21

Date Collected: 08/18/21 10:30

Matrix: Solid

Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.261**		0.0897	0.0936	1.00	0.0944	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Thorium-232	**0.272**		0.141	0.144		0.132	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Americium-241	0.0553	U	0.121	0.121		0.207	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Cesium-137	-0.0152	U	0.0535	0.0535		0.0947	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Cobalt-60	-0.0500	U	0.0907	0.0909		0.0984	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Europium-152	-0.0557	U	0.0989	0.0991		0.169	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Europium-154	0.0422	U	0.0797	0.0798		0.116	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Europium-155	-0.000915	U	0.142	0.142		0.367	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Sodium-22	0.0165	U	0.0296	0.0296		0.0526	pCi/g	08/26/21 12:50	09/18/21 09:43	1
Zinc-65	-0.00000000161	U	0.114	0.114		0.210	pCi/g	08/26/21 12:50	09/18/21 09:43	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.25**		0.734	0.745	5.00	1.18	pCi/g	09/13/21 15:48	09/23/21 23:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.2*		*40 - 110*	*09/13/21 15:48*	*09/23/21 23:47*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.15	U	1.49	1.50	5.00	2.48	pCi/g	09/05/21 20:15	09/29/21 00:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.3*		*30 - 110*	*09/05/21 20:15*	*09/29/21 00:42*	*1*

Client Sample ID: FSS-074-081821

Lab Sample ID: 160-43124-21

Date Collected: 08/18/21 10:30

Matrix: Solid

Date Received: 08/19/21 09:00

Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.82**		0.29	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 21:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/14/21 16:15	09/14/21 21:32	1

Client Sample ID: FSS-075-081821

Date Collected: 08/18/21 10:30
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-22

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0936	U	0.210	0.210	3.00	0.366	pCi/g	09/18/21 16:37	09/30/21 21:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*71.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:32*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:32*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0358	U	0.214	0.214	1.00	0.377	pCi/g	09/09/21 10:43	09/11/21 12:17	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00207	U	0.00407	0.00407	1.00	0.0402	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00831	U	0.0163	0.0163	1.00	0.0249	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.4*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.322**		0.103	0.106	1.00	0.0413	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0106	U	0.0208	0.0208	1.00	0.0318	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.264**		0.0947	0.0972	1.00	0.0568	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.3*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0172	U	0.568	0.568	5.00	1.02	pCi/g	09/20/21 09:08	09/21/21 14:00	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.580**		0.116	0.130		0.134	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Bismuth-212	0.313	U	0.534	0.535		0.921	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Bismuth-214	**0.312**		0.0944	0.0996		0.0892	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Lead-212	**0.466**		0.0777	0.0976		0.0709	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Lead-214	**0.342**		0.0777	0.0852		0.105	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Potassium-40	**3.29**		1.21	1.25		1.16	pCi/g	08/26/21 12:50	09/20/21 11:34	1

Client Sample ID: FSS-075-081821

Lab Sample ID: 160-43124-22
Date Collected: 08/18/21 10:30
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.312**		0.0944	0.0996	1.00	0.0892	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Thorium-232	**0.580**		0.116	0.130		0.134	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Americium-241	0.0462	U	0.113	0.114		0.195	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Cesium-137	-0.00804	U	0.0501	0.0501		0.0902	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Cobalt-60	0.00922	U	0.0379	0.0379		0.0544	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Europium-152	0.0655	U	0.157	0.158		0.142	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Europium-154	0.0319	U	0.0630	0.0631		0.0935	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Europium-155	0.0541	U	0.224	0.224		0.384	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Sodium-22	-0.00127	U	0.0357	0.0357		0.0699	pCi/g	08/26/21 12:50	09/20/21 11:34	1
Zinc-65	0.00727	U	0.113	0.113		0.207	pCi/g	08/26/21 12:50	09/20/21 11:34	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.977	U	0.691	0.699	5.00	1.13	pCi/g	09/13/21 15:48	09/24/21 00:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/13/21 15:48*	*09/24/21 00:54*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.311	U	1.54	1.54	5.00	2.68	pCi/g	09/05/21 20:15	09/29/21 01:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.4*		*30 - 110*	*09/05/21 20:15*	*09/29/21 01:15*	*1*

Client Sample ID: FSS-075-081821

Lab Sample ID: 160-43124-22
Date Collected: 08/18/21 10:30
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 98.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.5**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 21:23	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/14/21 16:15	09/14/21 21:34	1

Client Sample ID: FSS-076-081821

Lab Sample ID: 160-43124-23
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.258	U	0.201	0.202	3.00	0.326	pCi/g	09/18/21 16:37	09/30/21 21:32	1

Client Sample ID: FSS-076-081821

Date Collected: 08/18/21 10:45
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-23

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.0		40 - 110	09/18/21 16:37	09/30/21 21:32	1
Y Carrier	94.6		40 - 110	09/18/21 16:37	09/30/21 21:32	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.131	U	0.230	0.230	1.00	0.394	pCi/g	09/09/21 10:43	09/11/21 12:40	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00202	U	0.00395	0.00396	1.00	0.0391	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00202	U	0.0173	0.0173	1.00	0.0500	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	82.9		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.274**		0.0908	0.0936	1.00	0.0432	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0144	U	0.0274	0.0274	1.00	0.0537	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.212**		0.0800	0.0819	1.00	0.0431	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	90.6		30 - 110	09/05/21 20:37	09/18/21 21:20	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.240	U	0.614	0.614	5.00	1.07	pCi/g	09/20/21 09:08	09/21/21 14:23	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.447**		0.138	0.145		0.0823	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Bismuth-212	-0.250	U	0.691	0.691		1.22	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Bismuth-214	**0.375**		0.0940	0.101		0.0727	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Lead-212	**0.417**		0.0804	0.0962		0.0805	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Lead-214	**0.383**		0.0826	0.0913		0.0828	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Potassium-40	**4.08**		0.894	0.983		0.673	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Radium-226	**0.375**		0.0940	0.101	1.00	0.0727	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Thorium-232	**0.447**		0.138	0.145		0.0823	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Americium-241	0.0591	U	0.159	0.159		0.272	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Cesium-137	**0.0894**		0.0415	0.0425		0.0363	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Cobalt-60	-0.0549	U	0.104	0.104		0.116	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Europium-152	0.0676	U	0.0999	0.100		0.162	pCi/g	08/26/21 12:50	09/18/21 09:44	1

Client Sample ID: FSS-076-081821

Lab Sample ID: 160-43124-23
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0443	U	0.0769	0.0771		0.107	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Europium-155	-0.00424	U	0.128	0.128		0.338	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Sodium-22	-0.0126	U	0.0486	0.0486		0.0894	pCi/g	08/26/21 12:50	09/18/21 09:44	1
Zinc-65	-0.0937	U	0.106	0.107		0.289	pCi/g	08/26/21 12:50	09/18/21 09:44	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.933	U	0.944	0.949	5.00	1.57	pCi/g	09/13/21 15:48	09/21/21 17:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.9*		*40 - 110*	*09/13/21 15:48*	*09/21/21 17:16*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0867	U	1.63	1.63	5.00	2.93	pCi/g	09/05/21 20:15	09/29/21 01:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.9*		*30 - 110*	*09/05/21 20:15*	*09/29/21 01:49*	*1*

Client Sample ID: FSS-076-081821

Lab Sample ID: 160-43124-23
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	12		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 21:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	J	18	6.0	ug/Kg	☼	09/14/21 16:15	09/14/21 21:37	1

Client Sample ID: FSS-077-081821

Lab Sample ID: 160-43124-24
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.136	U	0.195	0.195	3.00	0.372	pCi/g	09/18/21 16:37	09/30/21 21:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*74.6*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:33*	*1*
Y Carrier	*95.0*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:33*	*1*

Client Sample ID: FSS-077-081821

Date Collected: 08/18/21 10:45
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-24

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.102	U	0.225	0.225	1.00	0.387	pCi/g	09/09/21 10:43	09/11/21 13:03	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00603	U	0.00682	0.00684	1.00	0.0497	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00402	U	0.00558	0.00559	1.00	0.0451	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.8*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.337**		0.0986	0.102	1.00	0.0415	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0161	U	0.0260	0.0260	1.00	0.0446	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.229**		0.0823	0.0844	1.00	0.0494	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*89.2*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.147	U	0.711	0.711	5.00	1.25	pCi/g	09/20/21 09:08	09/21/21 14:46	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.354**		0.111	0.117		0.0670	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Bismuth-212	0.287	U	0.452	0.453		0.777	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Bismuth-214	**0.320**		0.0956	0.101		0.0901	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Lead-212	**0.470**		0.0696	0.0916		0.0506	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Lead-214	**0.374**		0.0752	0.0843		0.0820	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Potassium-40	**4.99**		0.829	0.968		0.264	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Radium-226	**0.320**		0.0956	0.101	1.00	0.0901	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Thorium-232	**0.354**		0.111	0.117		0.0670	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Americium-241	-0.0563	U	0.142	0.142		0.243	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Cesium-137	**0.103**		0.0359	0.0374		0.0272	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Cobalt-60	0.0111	U	0.0194	0.0195		0.0262	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Europium-152	0.0750	U	0.115	0.115		0.150	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Europium-154	0.0258	U	0.0350	0.0351		0.105	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Europium-155	0.000	U	0.0752	0.0752		0.401	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Sodium-22	0.0195	U	0.0358	0.0359		0.0632	pCi/g	08/26/21 12:50	09/20/21 11:36	1
Zinc-65	0.0411	U	0.0886	0.0887		0.156	pCi/g	08/26/21 12:50	09/20/21 11:36	1

Client Sample ID: FSS-077-081821

Lab Sample ID: 160-43124-24
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.13	U	0.894	0.902	5.00	1.48	pCi/g	09/13/21 15:48	09/21/21 18:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.4*		*40 - 110*	*09/13/21 15:48*	*09/21/21 18:22*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.685	U	1.53	1.53	5.00	2.64	pCi/g	09/05/21 20:15	09/29/21 02:22	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.8*		*30 - 110*	*09/05/21 20:15*	*09/29/21 02:22*	*1*

Client Sample ID: FSS-077-081821

Lab Sample ID: 160-43124-24
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 97.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.2		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 21:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/14/21 16:15	09/14/21 21:40	1

Client Sample ID: FSS-078-081821

Lab Sample ID: 160-43124-25
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.109	U	0.172	0.172	3.00	0.297	pCi/g	09/18/21 16:37	09/30/21 21:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.9*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:35*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:35*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0854	U	0.221	0.221	1.00	0.380	pCi/g	09/09/21 10:43	09/11/21 13:26	1

Client Sample ID: FSS-078-081821

Date Collected: 08/18/21 10:45
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-25

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00186	U	0.00365	0.00366	1.00	0.0361	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.00187	U	0.00366	0.00366	1.00	0.0361	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.1*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.275**		0.0956	0.0983	1.00	0.0557	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	0.0285	U	0.0356	0.0357	1.00	0.0502	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.214**		0.0832	0.0851	1.00	0.0403	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.7*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0631	U	0.703	0.703	5.00	1.25	pCi/g	09/20/21 09:08	09/21/21 15:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.627**		0.182	0.192		0.108	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Bismuth-212	0.574	U	1.04	1.04		1.79	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Bismuth-214	**0.688**		0.187	0.199		0.172	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Lead-212	**0.350**		0.0911	0.0979		0.106	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Lead-214	**0.576**		0.148	0.159		0.141	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Potassium-40	**5.96**		1.14	1.28		0.418	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Radium-226	**0.688**		0.187	0.199	1.00	0.172	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Thorium-232	**0.627**		0.182	0.192		0.108	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Americium-241	0.0274	U	0.168	0.168		0.291	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Cesium-137	-0.00913	U	0.0604	0.0604		0.110	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Cobalt-60	-0.0300	U	0.0908	0.0908		0.104	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Europium-152	0.0740	U	0.114	0.114		0.213	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Europium-154	0.0880	U	0.115	0.115		0.148	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Europium-155	0.0322	U	0.177	0.178		0.310	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Sodium-22	-0.0327	U	0.0675	0.0675		0.119	pCi/g	08/26/21 12:50	09/18/21 10:26	1
Zinc-65	0.000750	U	0.179	0.179		0.327	pCi/g	08/26/21 12:50	09/18/21 10:26	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.178	U	0.918	0.918	5.00	1.63	pCi/g	09/13/21 15:48	09/21/21 19:29	1

Client Sample ID: FSS-078-081821

Lab Sample ID: 160-43124-25
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	96.3		40 - 110	09/13/21 15:48	09/21/21 19:29	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.610	U	1.39	1.39	5.00	2.37	pCi/g	09/05/21 20:15	09/29/21 02:56	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.1		30 - 110	09/05/21 20:15	09/29/21 02:56	1

Client Sample ID: FSS-078-081821

Lab Sample ID: 160-43124-25
Date Collected: 08/18/21 10:45
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 95.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.2		0.29	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 21:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	6.0	ug/Kg	☼	09/14/21 16:15	09/14/21 21:42	1

Client Sample ID: FSS-079-081821

Lab Sample ID: 160-43124-26
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0808	U	0.162	0.162	3.00	0.311	pCi/g	09/18/21 16:37	09/30/21 21:35	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	75.6		40 - 110	09/18/21 16:37	09/30/21 21:35	1
Y Carrier	99.4		40 - 110	09/18/21 16:37	09/30/21 21:35	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0159	U	0.215	0.215	1.00	0.380	pCi/g	09/09/21 10:43	09/11/21 13:48	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0149	U	0.0263	0.0264	1.00	0.0498	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	0.00560	U	0.0151	0.0151	1.00	0.0361	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	88.7		30 - 110	09/05/21 16:27	09/18/21 21:18	1

Client Sample ID: FSS-079-081821

Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-26

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.221**		0.0785	0.0806	1.00	0.0348	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-235/236	-0.00224	U	0.00438	0.00439	1.00	0.0433	pCi/g	09/05/21 20:37	09/18/21 21:20	1
Uranium-238	**0.242**		0.0821	0.0845	1.00	0.0347	pCi/g	09/05/21 20:37	09/18/21 21:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.8*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:20*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.123	U	0.716	0.716	5.00	1.26	pCi/g	09/20/21 09:08	09/21/21 15:31	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.241	U	0.176	0.178		0.247	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Bismuth-212	-0.0117	U	0.491	0.491		0.917	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Bismuth-214	**0.371**		0.0945	0.102		0.0704	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Lead-212	**0.347**		0.0741	0.0862		0.0784	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Lead-214	**0.351**		0.0827	0.0901		0.0999	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Potassium-40	**4.46**		0.912	1.02		0.652	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Radium-226	**0.371**		0.0945	0.102	1.00	0.0704	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Thorium-232	0.241	U	0.176	0.178		0.247	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Americium-241	0.00335	U	0.117	0.117		0.165	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Cesium-137	**0.292**		0.0571	0.0644		0.0213	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Cobalt-60	0.0214	U	0.0311	0.0312		0.0565	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Europium-152	0.106	U	0.138	0.139		0.150	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Europium-154	0.0178	U	0.0287	0.0288		0.116	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Europium-155	-0.0888	U	0.0599	0.0606		0.405	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Sodium-22	-0.0230	U	0.0413	0.0414		0.0727	pCi/g	08/26/21 12:50	09/20/21 11:37	1
Zinc-65	-0.000205	U	0.132	0.132		0.241	pCi/g	08/26/21 12:50	09/20/21 11:37	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.375	U	0.898	0.899	5.00	1.55	pCi/g	09/13/21 15:48	09/21/21 20:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*93.9*		*40 - 110*	*09/13/21 15:48*	*09/21/21 20:35*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.272	U	1.34	1.34	5.00	2.33	pCi/g	09/05/21 20:15	09/29/21 03:29	1

Client Sample ID: FSS-079-081821

Lab Sample ID: 160-43124-26
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	88.7		30 - 110	09/05/21 20:15	09/29/21 03:29	1

Client Sample ID: FSS-079-081821

Lab Sample ID: 160-43124-26
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**24**		0.27	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 21:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**10**	**J**	19	6.1	ug/Kg	☼	09/14/21 16:15	09/14/21 21:45	1

Client Sample ID: FSS-279-081821

Lab Sample ID: 160-43124-27
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0786	U	0.189	0.190	3.00	0.333	pCi/g	09/18/21 16:37	09/30/21 21:35	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	73.4		40 - 110	09/18/21 16:37	09/30/21 21:35	1
Y Carrier	98.7		40 - 110	09/18/21 16:37	09/30/21 21:35	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0494	U	0.228	0.228	1.00	0.403	pCi/g	09/09/21 10:43	09/11/21 14:11	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0106	U	0.0390	0.0390	1.00	0.0873	pCi/g	09/05/21 17:56	09/14/21 17:40	1
Plutonium-239/240	-0.00266	U	0.00522	0.00523	1.00	0.0516	pCi/g	09/05/21 17:56	09/14/21 17:40	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	76.1		30 - 110	09/05/21 17:56	09/14/21 17:40	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0642	U	0.0932	0.0934	1.00	0.163	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-235/236	-0.0200	U	0.0333	0.0333	1.00	0.117	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-238	**0.224**		0.101	0.103	1.00	0.0876	pCi/g	09/05/21 20:32	09/15/21 22:19	1

Client Sample ID: FSS-279-081821

Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-27

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	67.8		30 - 110	09/05/21 20:32	09/15/21 22:19	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.281	U	0.450	0.451	5.00	0.773	pCi/g	09/20/21 09:08	09/21/21 15:54	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.277**		0.150	0.153		0.146	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Bismuth-212	-0.0155	U	0.538	0.538		1.00	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Bismuth-214	**0.240**		0.0827	0.0862		0.0851	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Lead-212	**0.394**		0.0806	0.0949		0.0842	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Lead-214	**0.284**		0.0911	0.0956		0.0913	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Potassium-40	**3.44**		0.958	1.02		0.862	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Radium-226	**0.240**		0.0827	0.0862	1.00	0.0851	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Thorium-232	**0.277**		0.150	0.153		0.146	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Americium-241	-0.0719	U	0.188	0.188		0.321	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Cesium-137	**0.232**		0.0522	0.0573		0.0225	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Cobalt-60	0.0206	U	0.0492	0.0492		0.0596	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Europium-152	0.0684	U	0.135	0.135		0.144	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Europium-154	0.0449	U	0.102	0.102		0.109	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Europium-155	0.0554	U	0.118	0.118		0.324	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Sodium-22	0.0214	U	0.0187	0.0188		0.0315	pCi/g	08/26/21 12:50	09/18/21 10:27	1
Zinc-65	-0.0560	U	0.101	0.101		0.254	pCi/g	08/26/21 12:50	09/18/21 10:27	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**15.9**		1.44	2.17	5.00	1.53	pCi/g	09/13/21 15:48	09/21/21 22:47	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	90.9		40 - 110	09/13/21 15:48	09/21/21 22:47	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.46	U	1.62	1.62	5.00	2.74	pCi/g	09/05/21 20:20	09/24/21 17:15	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	76.1		30 - 110	09/05/21 20:20	09/24/21 17:15	1

Client Sample ID: FSS-279-081821

Lab Sample ID: 160-43124-27
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**25**		0.28	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 22:01	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**9.8**	**J**	19	6.1	ug/Kg	☼	09/14/21 16:15	09/14/21 21:47	1

Client Sample ID: FSS-080-081821

Lab Sample ID: 160-43124-28
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.173	U	0.209	0.210	3.00	0.354	pCi/g	09/18/21 16:37	09/30/21 21:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*67.8*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.131	U	0.239	0.239	1.00	0.411	pCi/g	09/09/21 10:43	09/11/21 14:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0202	U	0.0280	0.0281	1.00	0.0453	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.00607	U	0.0163	0.0164	1.00	0.0392	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.2*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.218**		0.0885	0.0903	1.00	0.0678	pCi/g	09/05/21 20:32	09/16/21 11:21	1
Uranium-235/236	0.00537	U	0.0223	0.0223	1.00	0.0601	pCi/g	09/05/21 20:32	09/16/21 11:21	1
Uranium-238	**0.237**		0.0914	0.0935	1.00	0.0646	pCi/g	09/05/21 20:32	09/16/21 11:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.0*		*30 - 110*	*09/05/21 20:32*	*09/16/21 11:21*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.257	U	0.708	0.708	5.00	1.23	pCi/g	09/21/21 10:06	09/22/21 15:33	1

Client Sample ID: FSS-080-081821

Lab Sample ID: 160-43124-28

Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.362**		0.131	0.136		0.102	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Bismuth-212	0.0491	U	0.517	0.517		0.941	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Bismuth-214	**0.311**		0.0813	0.0873		0.0750	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Lead-212	**0.355**		0.0688	0.0822		0.0729	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Lead-214	**0.310**		0.0775	0.0836		0.0982	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Potassium-40	**3.92**		0.794	0.886		0.579	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Radium-226	**0.311**		0.0813	0.0873	1.00	0.0750	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Thorium-232	**0.362**		0.131	0.136		0.102	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Americium-241	0.0519	U	0.119	0.119		0.203	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Cesium-137	**0.238**		0.0616	0.0662		0.0733	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Cobalt-60	-0.0286	U	0.0705	0.0705		0.0783	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Europium-152	0.0543	U	0.0753	0.0755		0.137	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Europium-154	-0.0139	U	0.0618	0.0618		0.107	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Europium-155	0.0541	U	0.132	0.132		0.397	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Sodium-22	0.0241	U	0.0179	0.0180		0.0254	pCi/g	08/26/21 12:50	09/20/21 12:11	1
Zinc-65	0.000	U	0.0120	0.0120		0.190	pCi/g	08/26/21 12:50	09/20/21 12:11	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0924	U	1.01	1.01	5.00	1.75	pCi/g	09/13/21 15:48	09/21/21 23:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.1*		*40 - 110*	*09/13/21 15:48*	*09/21/21 23:53*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.294	U	1.20	1.20	5.00	2.13	pCi/g	09/05/21 20:20	09/24/21 19:27	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.2*		*30 - 110*	*09/05/21 20:20*	*09/24/21 19:27*	*1*

Client Sample ID: FSS-080-081821

Lab Sample ID: 160-43124-28

Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**17**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 22:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/14/21 16:15	09/14/21 23:01	1

Client Sample ID: FSS-280-081821

Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-29

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.111	U	0.155	0.155	3.00	0.305	pCi/g	09/18/21 16:37	09/30/21 21:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0429	U	0.221	0.221	1.00	0.388	pCi/g	09/09/21 10:43	09/11/21 14:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00477	U	0.00662	0.00663	1.00	0.0535	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.00956	U	0.0281	0.0281	1.00	0.0638	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.7*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.183**		0.0827	0.0841	1.00	0.0611	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.00285	U	0.00558	0.00559	1.00	0.0551	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.217**		0.0879	0.0897	1.00	0.0442	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*78.6*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.172	U	0.774	0.774	5.00	1.36	pCi/g	09/21/21 10:06	09/22/21 15:55	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.372**		0.131	0.136		0.100	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Bismuth-212	0.0189	U	0.488	0.488		0.893	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Bismuth-214	**0.278**		0.113	0.116		0.114	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Lead-212	**0.324**		0.0627	0.0750		0.0636	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Lead-214	**0.198**		0.0784	0.0809		0.0845	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Potassium-40	**4.25**		0.751	0.864		0.255	pCi/g	08/26/21 12:50	09/20/21 12:12	1

Client Sample ID: FSS-280-081821

Lab Sample ID: 160-43124-29
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.278**		0.113	0.116	1.00	0.114	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Thorium-232	**0.372**		0.131	0.136		0.100	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Americium-241	0.000	U	0.0478	0.0478		0.128	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Cesium-137	**0.142**		0.0460	0.0482		0.0371	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Cobalt-60	0.0210	U	0.0117	0.0119		0.0252	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Europium-152	0.00928	U	0.0243	0.0243		0.139	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Europium-154	0.0472	U	0.0579	0.0581		0.0809	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Europium-155	-0.0675	U	0.277	0.277		0.472	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Sodium-22	-0.00992	U	0.0394	0.0394		0.0725	pCi/g	08/26/21 12:50	09/20/21 12:12	1
Zinc-65	0.000	U	0.0115	0.0115		0.159	pCi/g	08/26/21 12:50	09/20/21 12:12	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.651	U	0.778	0.781	5.00	1.30	pCi/g	09/13/21 15:48	09/22/21 01:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.3*		*40 - 110*	*09/13/21 15:48*	*09/22/21 01:00*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.0548	U	1.33	1.33	5.00	2.33	pCi/g	09/05/21 20:20	09/24/21 20:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.7*		*30 - 110*	*09/05/21 20:20*	*09/24/21 20:34*	*1*

Client Sample ID: FSS-280-081821

Lab Sample ID: 160-43124-29
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 96.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**18**		0.30	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 22:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**6.6**	**J**	20	6.5	ug/Kg	☼	09/14/21 16:15	09/14/21 23:03	1

Client Sample ID: FSS-081-081821

Lab Sample ID: 160-43124-30
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.190	U	0.207	0.208	3.00	0.347	pCi/g	09/18/21 16:37	09/30/21 21:36	1

Client Sample ID: FSS-081-081821

Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-30

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	71.1		40 - 110	09/18/21 16:37	09/30/21 21:36	1
Y Carrier	98.7		40 - 110	09/18/21 16:37	09/30/21 21:36	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0401	U	0.213	0.213	1.00	0.389	pCi/g	09/09/21 10:43	09/11/21 15:19	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00661	U	0.0263	0.0263	1.00	0.0627	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.000	U	0.00433	0.00433	1.00	0.0265	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	81.8		30 - 110	09/05/21 17:56	09/14/21 17:39	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0416	U	0.0858	0.0859	1.00	0.158	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.0226	U	0.0329	0.0330	1.00	0.118	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	0.0881	U	0.0693	0.0697	1.00	0.0914	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	63.5		30 - 110	09/05/21 20:32	09/14/21 17:54	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.529	U	0.677	0.680	5.00	1.15	pCi/g	09/21/21 10:06	09/22/21 16:18	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.578**		0.108	0.122		0.0704	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Bismuth-212	0.226	U	0.607	0.608		1.07	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Bismuth-214	**0.317**		0.0844	0.0903		0.0786	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Lead-212	**0.353**		0.0721	0.0848		0.0800	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Lead-214	**0.319**		0.0716	0.0787		0.0777	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Potassium-40	**3.69**		0.796	0.878		0.607	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Radium-226	**0.317**		0.0844	0.0903	1.00	0.0786	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Thorium-232	**0.578**		0.108	0.122		0.0704	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Americium-241	0.0188	U	0.121	0.121		0.209	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Cesium-137	0.0237	U	0.0432	0.0433		0.0748	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Cobalt-60	0.0146	U	0.0100	0.0101		0.0516	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Europium-152	0.0737	U	0.131	0.132		0.122	pCi/g	08/26/21 12:50	09/18/21 15:23	1

Client Sample ID: FSS-081-081821

Lab Sample ID: 160-43124-30
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0284	U	0.0566	0.0567		0.0915	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Europium-155	0.0617	U	0.162	0.163		0.278	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Sodium-22	**0.0506**		0.0265	0.0269		0.0266	pCi/g	08/26/21 12:50	09/18/21 15:23	1
Zinc-65	0.0423	U	0.0881	0.0882		0.155	pCi/g	08/26/21 12:50	09/18/21 15:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.744	U	0.847	0.850	5.00	1.43	pCi/g	09/13/21 15:48	09/22/21 02:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*96.1*		*40 - 110*	*09/13/21 15:48*	*09/22/21 02:06*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.432	U	1.38	1.38	5.00	2.37	pCi/g	09/05/21 20:20	09/24/21 21:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*81.8*		*30 - 110*	*09/05/21 20:20*	*09/24/21 21:40*	*1*

Client Sample ID: FSS-081-081821

Lab Sample ID: 160-43124-30
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00
Percent Solids: 95.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.6**		0.29	0.018	mg/Kg	☼	09/12/21 07:16	09/13/21 22:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	09/14/21 16:15	09/14/21 23:06	1

Client Sample ID: FSS-281-081821

Lab Sample ID: 160-43124-31
Date Collected: 08/18/21 11:00
Matrix: Solid
Date Received: 08/19/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.140	U	0.171	0.171	3.00	0.336	pCi/g	09/18/21 16:37	09/30/21 21:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*72.0*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*

Client Sample ID: FSS-281-081821

Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Lab Sample ID: 160-43124-31

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0902	U	0.218	0.218	1.00	0.374	pCi/g	09/09/21 10:43	09/11/21 15:42	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00449	U	0.0285	0.0285	1.00	0.0792	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	-0.0135	U	0.0108	0.0108	1.00	0.0675	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.5*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.205**		0.0995	0.101	1.00	0.100	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0194	U	0.0370	0.0370	1.00	0.0725	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.221**		0.0985	0.100	1.00	0.0816	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*68.9*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0649	U	0.615	0.615	5.00	1.11	pCi/g	09/21/21 10:06	09/22/21 16:41	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.532**		0.168	0.176		0.224	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Bismuth-212	-0.503	U	0.930	0.931		1.60	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Bismuth-214	0.0787	U	0.142	0.142		0.387	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Lead-212	**0.484**		0.0914	0.104		0.0899	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Lead-214	**0.391**		0.119	0.126		0.122	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Potassium-40	**4.42**		0.919	1.02		0.366	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Radium-226	0.0787	U	0.142	0.142	1.00	0.387	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Thorium-232	**0.532**		0.168	0.176		0.224	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Americium-241	-0.0722	U	0.156	0.157		0.268	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Cesium-137	-0.00288	U	0.0652	0.0652		0.119	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Cobalt-60	0.0105	U	0.0361	0.0362		0.0681	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Europium-152	0.0612	U	0.114	0.115		0.175	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Europium-154	0.0463	U	0.0769	0.0771		0.130	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Europium-155	0.000	U	0.0635	0.0635		0.402	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Sodium-22	-0.0238	U	0.0584	0.0584		0.105	pCi/g	08/26/21 12:50	09/18/21 15:24	1
Zinc-65	0.000	U	0.0167	0.0167		0.241	pCi/g	08/26/21 12:50	09/18/21 15:24	1

Client Sample ID: FSS-281-081821

Lab Sample ID: 160-43124-31
Matrix: Solid
Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.168	U	0.813	0.813	5.00	1.42	pCi/g	09/13/21 15:48	09/22/21 03:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/13/21 15:48*	*09/22/21 03:13*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.713	U	1.28	1.28	5.00	2.15	pCi/g	09/05/21 20:20	09/24/21 22:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.5*		*30 - 110*	*09/05/21 20:20*	*09/24/21 22:46*	*1*

Client Sample ID: FSS-281-081821

Lab Sample ID: 160-43124-31
Matrix: Solid
Date Collected: 08/18/21 11:00
Date Received: 08/19/21 09:00
Percent Solids: 95.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.8**		0.29	0.017	mg/Kg	☼	09/12/21 07:16	09/13/21 22:15	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/14/21 16:15	09/14/21 23:08	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549127/1-A
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549127

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/12/21 07:16	09/13/21 19:22	1

Lab Sample ID: LCS 280-549127/2-A
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549127

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.5		mg/Kg		98	84 - 118

Lab Sample ID: 160-43124-1 MS
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: FSS-059-081821
Prep Type: Total/NA
Prep Batch: 549127

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.7		19.7	20.7		mg/Kg	☼	96	84 - 118

Lab Sample ID: 160-43124-1 MSD
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: FSS-059-081821
Prep Type: Total/NA
Prep Batch: 549127

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.7		17.3	18.5		mg/Kg	☼	97	84 - 118	11	20

Lab Sample ID: MB 280-549129/1-A
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549129

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/12/21 07:16	09/13/21 21:15	1

Lab Sample ID: LCS 280-549129/2-A
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.5		mg/Kg		98	84 - 118

Lab Sample ID: 160-43124-22 MS
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: FSS-075-081821
Prep Type: Total/NA
Prep Batch: 549129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	2.5		19.7	21.1		mg/Kg	☼	94	84 - 118

Lab Sample ID: 160-43124-22 MSD
Matrix: Solid
Analysis Batch: 549718

Client Sample ID: FSS-075-081821
Prep Type: Total/NA
Prep Batch: 549129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	2.5		19.3	19.3		mg/Kg	☼	87	84 - 118	9	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-549358/1-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549358

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/14/21 16:15	09/14/21 19:07	1

Lab Sample ID: LCS 280-549358/2-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	343		ug/Kg		103	80 - 124

Lab Sample ID: LCSD 280-549358/3-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549358

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	339		ug/Kg		102	80 - 124	1	20

Lab Sample ID: 280-152426-A-16-H MS
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 549358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	18	U	437	455		ug/Kg	☼	104	80 - 124

Lab Sample ID: 280-152426-A-16-I MSD
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 549358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	18	U	453	467		ug/Kg	☼	103	80 - 124	3	20

Lab Sample ID: MB 280-549360/1-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549360

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/14/21 16:15	09/14/21 20:31	1

Lab Sample ID: LCS 280-549360/2-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	344		ug/Kg		103	80 - 124

Lab Sample ID: LCSD 280-549360/3-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549360

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	343		ug/Kg		103	80 - 124	0	20

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43124-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: 160-43124-7 MS
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 549360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	350	361		ug/Kg	☼	103	80 - 124

Lab Sample ID: 160-43124-7 MSD
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 549360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	356	364		ug/Kg	☼	102	80 - 124	1	20

Lab Sample ID: MB 280-549362/1-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549362

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/14/21 16:15	09/14/21 21:50	1

Lab Sample ID: LCS 280-549362/2-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	339		ug/Kg		102	80 - 124

Lab Sample ID: LCSD 280-549362/3-A
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	342		ug/Kg		103	80 - 124	1	20

Lab Sample ID: 160-43254-B-3-B MS
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	18	U	493	496		ug/Kg	☼	101	80 - 124

Lab Sample ID: 160-43254-B-3-C MSD
Matrix: Solid
Analysis Batch: 549897

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 549362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	18	U	445	455		ug/Kg	☼	102	80 - 124	9	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527607/1-A
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527607

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.3002	U	0.202	0.203	3.00	0.322	pCi/g	09/18/21 16:37	09/30/21 21:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*

Lab Sample ID: LCS 160-527607/2-A
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527607

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	7.718		0.803	3.00	0.281	pCi/g	101	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*87.7*		*40 - 110*
Y Carrier	*94.2*		*40 - 110*

Lab Sample ID: 160-43124-21 DU
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: FSS-074-081821
Prep Type: Total/NA
Prep Batch: 527607

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0339	U		0.01645	U	0.216	3.00	0.387	pCi/g			0.12	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*75.6*		*40 - 110*
Y Carrier	*95.7*		*40 - 110*

Lab Sample ID: MB 160-527608/1-A
Matrix: Solid
Analysis Batch: 529685

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527608

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1314	U	0.174	0.175	3.00	0.296	pCi/g	09/18/21 17:16	09/30/21 21:41	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.6*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*
Y Carrier	*96.8*		*40 - 110*	*09/18/21 17:16*	*09/30/21 21:41*	*1*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: LCS 160-527608/2-A
Matrix: Solid
Analysis Batch: 529685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527608

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	5.622	J	0.602	3.00	0.228	pCi/g	74	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*101*		*40 - 110*
Y Carrier	*99.1*		*40 - 110*

Lab Sample ID: 160-43124-1 DU
Matrix: Solid
Analysis Batch: 530077

Client Sample ID: FSS-059-081821
Prep Type: Total/NA
Prep Batch: 527608

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.377	J		0.003469	U J	0.182	3.00	0.332	pCi/g			2.65	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*79.8*		*40 - 110*
Y Carrier	*98.3*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-526077/1-A
Matrix: Solid
Analysis Batch: 526421

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526077

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.03003	U	0.234	0.234	1.00	0.433	pCi/g	09/09/21 10:38	09/10/21 20:35	1

Lab Sample ID: LCS 160-526077/2-A
Matrix: Solid
Analysis Batch: 526421

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526077

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.62	7.556		0.890	1.00	0.436	pCi/g	99	79 - 125		

Lab Sample ID: 160-43124-18 MS
Matrix: Solid
Analysis Batch: 526421

Client Sample ID: FSS-071-081821
Prep Type: Total/NA
Prep Batch: 526077

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.00604	U	7.54	7.482		0.895	1.00	0.458	pCi/g	99	78 - 122		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43124-19 DU
Matrix: Solid
Analysis Batch: 526421

Client Sample ID: FSS-072-081821
Prep Type: Total/NA
Prep Batch: 526077

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-0.151	U		-0.2088	U	0.219	1.00	0.432	pCi/g			0.36	3

Lab Sample ID: MB 160-526079/1-A
Matrix: Solid
Analysis Batch: 526585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526079

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.05405	U	0.220	0.220	1.00	0.388	pCi/g	09/09/21 10:43	09/11/21 10:47	1

Lab Sample ID: LCS 160-526079/2-A
Matrix: Solid
Analysis Batch: 526585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526079

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.62	7.532		0.893	1.00	0.405	pCi/g	99	79 - 125		

Lab Sample ID: 160-43124-30 MS
Matrix: Solid
Analysis Batch: 526585

Client Sample ID: FSS-081-081821
Prep Type: Total/NA
Prep Batch: 526079

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.0401	U	7.54	6.760		0.811	1.00	0.380	pCi/g	90	78 - 122		

Lab Sample ID: 160-43124-31 DU
Matrix: Solid
Analysis Batch: 526585

Client Sample ID: FSS-281-081821
Prep Type: Total/NA
Prep Batch: 526079

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.0902	U		0.2100	U	0.236	1.00	0.389	pCi/g			0.73	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-524999/1-A
Matrix: Solid
Analysis Batch: 526333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524999

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01627	U	0.0288	0.0288	1.00	0.0543	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-235/236	0.007594	U	0.0205	0.0205	1.00	0.0490	pCi/g	08/31/21 14:27	09/10/21 13:45	1
Uranium-238	-0.002030	U	0.0182	0.0182	1.00	0.0578	pCi/g	08/31/21 14:27	09/10/21 13:45	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*102*		*30 - 110*	*08/31/21 14:27*	*09/10/21 13:45*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-524999/2-A
Matrix: Solid
Analysis Batch: 526334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524999

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	5.631		0.629	1.00	0.0627	pCi/g	88	76 - 117
Uranium-238	6.51	6.623		0.714	1.00	0.0593	pCi/g	102	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*95.0*		*30 - 110*

Lab Sample ID: 160-43124-6 DU
Matrix: Solid
Analysis Batch: 526361

Client Sample ID: FSS-261-081821
Prep Type: Total/NA
Prep Batch: 524999

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-233/234	0.372		0.2026		0.0942	1.00	0.0651	pCi/g	2.13	3
Uranium-235/236	-0.00297	U	0.01964	U	0.0375	1.00	0.0734	pCi/g	1.17	3
Uranium-238	0.248		0.1549		0.0809	1.00	0.0508	pCi/g	1.44	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*66.2*		*30 - 110*

Lab Sample ID: MB 160-525622/1-A
Matrix: Solid
Analysis Batch: 527170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525622

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01076	U	0.0313	0.0313	1.00	0.0677	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-235/236	0.005358	U	0.0223	0.0223	1.00	0.0600	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-238	0.004297	U	0.0260	0.0260	1.00	0.0645	pCi/g	09/05/21 20:32	09/15/21 22:19	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.8*		*30 - 110*	*09/05/21 20:32*	*09/15/21 22:19*	*1*

Lab Sample ID: LCS 160-525622/2-A
Matrix: Solid
Analysis Batch: 526997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525622

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.194		0.675	1.00	0.0398	pCi/g	97	76 - 117
Uranium-238	6.51	5.982		0.657	1.00	0.0459	pCi/g	92	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*84.7*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-27 DU
Matrix: Solid
Analysis Batch: 526999

Client Sample ID: FSS-279-081821
Prep Type: Total/NA
Prep Batch: 525622

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.0642	U		0.1762		0.0868	1.00	0.0759	pCi/g			1.72	3
Uranium-235/236	-0.0200	U		0.04505	U	0.0476	1.00	0.0581	pCi/g			2.19	3
Uranium-238	0.224			0.2408		0.0988	1.00	0.0643	pCi/g			0.23	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*72.3*		*30 - 110*

Lab Sample ID: MB 160-525623/1-A
Matrix: Solid
Analysis Batch: 528063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525623

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.005973	U	0.0295	0.0295	1.00	0.0678	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-235/236	0.0000	U	0.00486	0.00486	1.00	0.0297	pCi/g	09/05/21 20:37	09/18/21 21:14	1
Uranium-238	0.01987	U	0.0275	0.0276	1.00	0.0445	pCi/g	09/05/21 20:37	09/18/21 21:14	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*103*		*30 - 110*	*09/05/21 20:37*	*09/18/21 21:14*	*1*

Lab Sample ID: LCS 160-525623/2-A
Matrix: Solid
Analysis Batch: 528066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525623

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.800		0.895	1.00	0.169	pCi/g	107	76 - 117		
Uranium-238			6.51	6.810		0.894	1.00	0.104	pCi/g	105	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*42.2*		*30 - 110*

Lab Sample ID: 160-43124-7 DU
Matrix: Solid
Analysis Batch: 528069

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 525623

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.111			0.1440		0.0699	1.00	0.0622	pCi/g			0.69	3
Uranium-235/236	0.0101	U		-0.00471 7	U	0.00655	1.00	0.0528	pCi/g			1.39	3
Uranium-238	0.115			0.1854		0.0759	1.00	0.0424	pCi/g			1.40	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-7 DU
Matrix: Solid
Analysis Batch: 528069

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 525623

Tracer	DU %Yield	DU Qualifier	Limits
Uranium-232	88.2		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-524992/1-A
Matrix: Solid
Analysis Batch: 526299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524992

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.004118	U	0.00571	0.00572	1.00	0.0461	pCi/g	08/31/21 13:44	09/10/21 13:25	1
Plutonium-239/240	-0.008245	U	0.00808	0.00811	1.00	0.0551	pCi/g	08/31/21 13:44	09/10/21 13:25	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	95.2		30 - 110	08/31/21 13:44	09/10/21 13:25	1

Lab Sample ID: LCS 160-524992/2-A
Matrix: Solid
Analysis Batch: 526300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524992

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.059		0.571	1.00	0.0555	pCi/g	97	80 - 125		
Plutonium-239/240			5.28	5.285		0.590	1.00	0.0235	pCi/g	100	81 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	94.1		30 - 110

Lab Sample ID: 160-43124-6 DU
Matrix: Solid
Analysis Batch: 526296

Client Sample ID: FSS-261-081821
Prep Type: Total/NA
Prep Batch: 524992

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0175	U		0.007388	U	0.0199	1.00	0.0477	pCi/g			0.48	3
Plutonium-239/240	-0.00219	U		-0.00493	U	0.00684	1.00	0.0552	pCi/g			0.66	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	79.8		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: MB 160-525614/1-A
Matrix: Solid
Analysis Batch: 528190

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525614

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.001858	U	0.0280	0.0280	1.00	0.0676	pCi/g	09/05/21 16:27	09/18/21 21:18	1
Plutonium-239/240	-0.003720	U	0.00516	0.00516	1.00	0.0417	pCi/g	09/05/21 16:27	09/18/21 21:18	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.4*		*30 - 110*	*09/05/21 16:27*	*09/18/21 21:18*	*1*

Lab Sample ID: LCS 160-525614/2-A
Matrix: Solid
Analysis Batch: 528191

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525614

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.475		0.599	1.00	0.0709	pCi/g	105	80 - 125		
Plutonium-239/240			5.28	5.307		0.584	1.00	0.0456	pCi/g	100	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*102*		*30 - 110*

Lab Sample ID: 160-43124-7 DU
Matrix: Solid
Analysis Batch: 528193

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 525614

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.000	U		0.005825	U	0.0157	1.00	0.0376	pCi/g			0.41	3
Plutonium-239/240	-0.00187	U		-0.003888	U	0.00540	1.00	0.0435	pCi/g			0.61	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*98.6*		*30 - 110*

Lab Sample ID: MB 160-525615/1-A
Matrix: Solid
Analysis Batch: 526926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525615

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.001978	U	0.0298	0.0298	1.00	0.0720	pCi/g	09/05/21 17:56	09/14/21 17:40	1
Plutonium-239/240	0.003959	U	0.0165	0.0165	1.00	0.0444	pCi/g	09/05/21 17:56	09/14/21 17:40	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:40*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-525615/2-A
Matrix: Solid
Analysis Batch: 526927

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525615

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.842		0.667	1.00	0.0909	pCi/g	112	80 - 125		
Plutonium-239/240			5.28	5.786		0.661	1.00	0.0585	pCi/g	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*79.6*		*30 - 110*

Lab Sample ID: 160-43124-27 DU
Matrix: Solid
Analysis Batch: 526929

Client Sample ID: FSS-279-081821
Prep Type: Total/NA
Prep Batch: 525615

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0106	U		-0.00229 8	U	0.00451	1.00	0.0445	pCi/g			0.65	3
Plutonium-239/240	-0.00266	U		-0.00460 0	U	0.00639	1.00	0.0515	pCi/g			0.46	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*86.0*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-527261/1-A
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527261

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.3198	U	0.746	0.747	5.00	1.37	pCi/g	09/16/21 08:54	09/17/21 18:54	1

Lab Sample ID: LCS 160-527261/2-A
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527261

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.32		9.23	5.00	1.37	pCi/g	98	75 - 125		

Lab Sample ID: 160-43124-1 MS
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: FSS-059-081821
Prep Type: Total/NA
Prep Batch: 527261

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.0223	U	77.4	77.58		8.68	5.00	1.26	pCi/g	100	29 - 128		

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43124-1 DU
Matrix: Solid
Analysis Batch: 527587

Client Sample ID: FSS-059-081821
Prep Type: Total/NA
Prep Batch: 527261

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0223	U		0.3708	U	0.611	5.00	1.04	pCi/g			0.88	3

Lab Sample ID: MB 160-527451/1-A
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527451

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.3874	U	0.612	0.614	5.00	1.07	pCi/g	09/17/21 06:21	09/17/21 22:19	1

Lab Sample ID: LCS 160-527451/2-A
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527451

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	81.63		8.99	5.00	1.06	pCi/g	97	75 - 125		

Lab Sample ID: 160-43113-C-1-D MS
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 527451

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.191	U	78.8	79.23		8.72	5.00	0.995	pCi/g	100	29 - 128		

Lab Sample ID: 160-43113-C-1-C DU
Matrix: Solid
Analysis Batch: 527631

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527451

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.191	U		-0.6189	U	0.454	5.00	0.818	pCi/g			1.31	3

Lab Sample ID: MB 160-527642/1-A
Matrix: Solid
Analysis Batch: 528295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527642

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.4009	U	0.781	0.782	5.00	1.35	pCi/g	09/20/21 09:08	09/21/21 10:14	1

Lab Sample ID: LCS 160-527642/2-A
Matrix: Solid
Analysis Batch: 528295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527642

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	83.36		9.33	5.00	1.33	pCi/g	99	75 - 125		

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: 160-43124-16 MS
Matrix: Solid
Analysis Batch: 528295

Client Sample ID: FSS-069-081821
Prep Type: Total/NA
Prep Batch: 527642

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.528	U	52.7	51.54		5.78	5.00	0.842	pCi/g	97	29 - 128		

Lab Sample ID: 160-43124-16 DU
Matrix: Solid
Analysis Batch: 528295

Client Sample ID: FSS-069-081821
Prep Type: Total/NA
Prep Batch: 527642

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.528	U		0.2214	U	0.648	5.00	1.13	pCi/g			0.62	3

Lab Sample ID: MB 160-527842/1-A
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527842

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.7523	U	0.826	0.830	5.00	1.39	pCi/g	09/21/21 10:06	09/22/21 14:48	1

Lab Sample ID: LCS 160-527842/2-A
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527842

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.72		9.27	5.00	1.38	pCi/g	98	75 - 125		

Lab Sample ID: 160-43154-D-1-N MS
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 527842

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.0400	U	81.1	81.27		9.10	5.00	1.33	pCi/g	100	29 - 128		

Lab Sample ID: 160-43154-D-1-M DU
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527842

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0400	U		-0.1802	U	0.766	5.00	1.39	pCi/g			0.29	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-524240/1-A
Matrix: Solid
Analysis Batch: 527596

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524240

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.1584		0.110	0.111		0.115	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Bismuth-212	0.0000	U	0.0995	0.0995		0.957	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Bismuth-214	-0.008202	U	0.126	0.126		0.232	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Lead-212	-0.03430	U	0.0733	0.0735		0.198	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Lead-214	0.03811	U	0.0911	0.0912		0.161	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Potassium-40	-0.5581	U	0.804	0.806		1.38	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Radium-226	-0.008202	U	0.126	0.126	1.00	0.232	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Thorium-232	0.1584		0.110	0.111		0.115	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Americium-241	-0.05574	U	0.153	0.153		0.264	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Cesium-137	-0.002464	U	0.0728	0.0728		0.102	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Cobalt-60	-0.01622	U	0.0906	0.0906		0.109	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Europium-152	0.07685	U	0.0556	0.0562		0.193	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Europium-154	0.05737	U	0.154	0.154		0.111	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Europium-155	0.03885	U	0.154	0.154		0.269	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Sodium-22	0.0000	U	0.0115	0.0115		0.0433	pCi/g	08/26/21 11:31	09/18/21 19:47	1
Zinc-65	-0.005834	U	0.131	0.131		0.166	pCi/g	08/26/21 11:31	09/18/21 19:47	1

Lab Sample ID: LCS 160-524240/2-A
Matrix: Solid
Analysis Batch: 527648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524240

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	95.39		9.81		1.07	pCi/g	99	87 - 116
Cesium-137	26.3	25.56		2.66		0.183	pCi/g	97	87 - 120
Cobalt-60	8.56	7.890		0.817		0.0726	pCi/g	92	87 - 115

Lab Sample ID: 160-43124-20 DU
Matrix: Solid
Analysis Batch: 527623

Client Sample ID: FSS-073-081821
Prep Type: Total/NA
Prep Batch: 524240

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.576		0.2355	U	0.0930		0.287	pCi/g	3.27	2
Bismuth-212	0.834		-0.1641	U	0.634		1.13	pCi/g	2.62	2
Bismuth-214	0.428		0.2640		0.0977		0.0975	pCi/g	1.75	2
Lead-212	0.424		0.4619		0.0941		0.0555	pCi/g	0.52	2
Lead-214	0.439		0.3298		0.0881		0.0679	pCi/g	1.45	2
Potassium-40	5.61		5.451		1.12		0.645	pCi/g	0.19	2
Radium-226	0.428		0.2640		0.0977	1.00	0.0975	pCi/g	1.75	2
Thorium-232	0.576		0.2355	U	0.0930		0.287	pCi/g	3.27	2
Americium-241	0.0742	U	0.05348	U	0.123		0.210	pCi/g	0.19	2
Cesium-137	0.0344	U	-0.03108	U	0.0670		0.116	pCi/g	1.40	2
Cobalt-60	0.0546		0.01723	U	0.0465		0.0549	pCi/g	1.40	2
Europium-152	0.116	U	0.01819	U	0.0645		0.150	pCi/g	1.10	2
Europium-154	0.0763	U	0.1707		0.0656		0.0985	pCi/g	1.45	2
Europium-155	0.0000000100	U	-0.07888	U	0.143		0.415	pCi/g	0.53	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43124-20 DU
Matrix: Solid
Analysis Batch: 527623

Client Sample ID: FSS-073-081821
Prep Type: Total/NA
Prep Batch: 524240

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Sodium-22	-0.0475	U	0.0000	U	0.00752		0.0283	pCi/g	1.36	2
Zinc-65	0.000	U	0.0000	U	0.0327		0.247	pCi/g	0	2

Lab Sample ID: MB 160-524254/1-A
Matrix: Solid
Analysis Batch: 527646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524254

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.1036	U	0.188	0.189		0.230	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Bismuth-212	0.4004	U	1.22	1.22		2.14	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Bismuth-214	-0.02352	U	0.190	0.190		0.341	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Lead-212	-0.04095	U	0.111	0.112		0.199	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Lead-214	0.05834	U	0.0960	0.0962		0.161	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Potassium-40	0.4077	U	0.853	0.854		0.960	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Radium-226	-0.02352	U	0.190	0.190	1.00	0.341	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Thorium-232	0.1036	U	0.188	0.189		0.230	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Americium-241	-0.05699	U	0.160	0.160		0.277	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Cesium-137	0.0000	U	0.0131	0.0131		0.0683	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Cobalt-60	-0.004496	U	0.0746	0.0746		0.0931	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-152	0.04512	U	0.110	0.110		0.165	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-154	-0.02492	U	0.0736	0.0736		0.129	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-155	-0.08839	U	0.311	0.311		0.534	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Sodium-22	-0.02825	U	0.0664	0.0665		0.120	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Zinc-65	-0.02170	U	0.183	0.183		0.334	pCi/g	08/26/21 12:50	09/20/21 16:24	1

Lab Sample ID: LCS 160-524254/2-A
Matrix: Solid
Analysis Batch: 527650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524254

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	93.85		9.67		1.15	pCi/g	97	87 - 116
Cesium-137	26.3	25.88		2.71		0.186	pCi/g	99	87 - 120
Cobalt-60	8.56	8.348		0.870		0.0382	pCi/g	98	87 - 115

Lab Sample ID: 160-43154-D-9-F DU
Matrix: Solid
Analysis Batch: 527648

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524254

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.488		0.2065	U	0.168		0.222	pCi/g	1.98	2
Bismuth-212	0.000	U	0.1136	U	0.541		0.972	pCi/g	0.39	2
Bismuth-214	0.504		0.2532		0.104		0.113	pCi/g	2.78	2
Lead-212	0.432		0.04314	U	0.0986		0.169	pCi/g	5.40	2
Lead-214	0.401		0.3225		0.0793		0.0662	pCi/g	1.18	2
Potassium-40	2.93		3.905		0.843		0.274	pCi/g	1.36	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43154-D-9-F DU
Matrix: Solid
Analysis Batch: 527648

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524254

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Radium-226	0.504			0.2532		0.104	1.00	0.113	pCi/g			2.78	2
Thorium-232	0.488			0.2065	U	0.168		0.222	pCi/g			1.98	2
Americium-241	-0.0693	U		0.01979	U	0.107		0.143	pCi/g			0.80	2
Cesium-137	0.0224	U		0.0000	U	0.00492		0.0873	pCi/g			0.94	2
Cobalt-60	0.0300	U		0.01843	U	0.0163		0.0272	pCi/g			0.82	2
Europium-152	0.116	U		0.05854	U	0.0974		0.138	pCi/g			0.58	2
Europium-154	0.0678	U		0.02712	U	0.0584		0.0911	pCi/g			0.60	2
Europium-155	0.0574	U		-0.07754	U	0.241		0.411	pCi/g			0.96	2
Sodium-22	-0.0169	U		0.02136	U	0.0172		0.0262	pCi/g			1.55	2
Zinc-65	-0.00458	U		0.0000	U	0.0124		0.201	pCi/g			0.1	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-526201/1-A
Matrix: Solid
Analysis Batch: 528332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526201

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.116		0.869	0.895	5.00	1.36	pCi/g	09/09/21 16:32	09/19/21 10:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.0*		*40 - 110*	*09/09/21 16:32*	*09/19/21 10:30*	*1*

Lab Sample ID: LCS 160-526201/2-A
Matrix: Solid
Analysis Batch: 528332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526201

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			19.1	17.35		2.19	5.00	1.18	pCi/g	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*103*		*40 - 110*

Lab Sample ID: 160-43124-2 DU
Matrix: Solid
Analysis Batch: 528332

Client Sample ID: FSS-259-081821
Prep Type: Total/NA
Prep Batch: 526201

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.84			1.728		0.795	5.00	1.22	pCi/g			0.19	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*103*		*40 - 110*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: MB 160-526820/1-A
Matrix: Solid
Analysis Batch: 528694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526820

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.355		0.765	0.777	5.00	1.22	pCi/g	09/13/21 15:48	09/23/21 21:33	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.9*		*40 - 110*	*09/13/21 15:48*	*09/23/21 21:33*	*1*

Lab Sample ID: LCS 160-526820/2-A
Matrix: Solid
Analysis Batch: 528694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526820

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	20.02		2.50	5.00	1.31	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*93.2*		*40 - 110*

Lab Sample ID: 160-43124-26 DU
Matrix: Solid
Analysis Batch: 528801

Client Sample ID: FSS-079-081821
Prep Type: Total/NA
Prep Batch: 526820

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.375	U		-0.02204	U	0.860	5.00	1.50	pCi/g			0.63	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*90.7*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-525000/1-A
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525000

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.2839	U	1.08	1.08	5.00	1.94	pCi/g	08/31/21 14:29	09/15/21 12:54	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*95.2*		*30 - 110*	*08/31/21 14:29*	*09/15/21 12:54*	*1*

Lab Sample ID: LCS 160-525000/2-A
Matrix: Solid
Analysis Batch: 527690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525000

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	19.34		2.53	5.00	1.96	pCi/g	97	75 - 125		

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	94.1		30 - 110

Lab Sample ID: 160-43124-6 DU
Matrix: Solid
Analysis Batch: 527447

Client Sample ID: FSS-261-081821
Prep Type: Total/NA
Prep Batch: 525000

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.385	U		-0.1104	U	1.31	5.00	2.34	pCi/g			0.32	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	79.8		30 - 110

Lab Sample ID: MB 160-525620/1-A
Matrix: Solid
Analysis Batch: 529298

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525620

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.5572	U	1.38	1.38	5.00	2.36	pCi/g	09/05/21 20:15	09/28/21 15:10	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	95.4		30 - 110	09/05/21 20:15	09/28/21 15:10	1

Lab Sample ID: LCS 160-525620/2-A
Matrix: Solid
Analysis Batch: 529298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525620

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	22.91		3.19	5.00	2.25	pCi/g	115	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	102		30 - 110

Lab Sample ID: 160-43124-7 DU
Matrix: Solid
Analysis Batch: 529298

Client Sample ID: FSS-062-081821
Prep Type: Total/NA
Prep Batch: 525620

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.88	U		0.9490	U	1.30	5.00	2.17	pCi/g			0.99	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	98.6		30 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: MB 160-525621/1-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525621

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.3016	U	1.35	1.35	5.00	2.37	pCi/g	09/05/21 20:20	09/24/21 15:03	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 20:20*	*09/24/21 15:03*	*1*

Lab Sample ID: LCS 160-525621/2-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525621

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	25.63		3.61	5.00	3.12	pCi/g	129	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*79.6*		*30 - 110*

Lab Sample ID: 160-43124-27 DU
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: FSS-279-081821
Prep Type: Total/NA
Prep Batch: 525621

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.46	U		0.8748	U	1.33	5.00	2.24	pCi/g			0.55	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*86.0*		*30 - 110*

Metals

Prep Batch: 549127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	3050B	
160-43124-2	FSS-259-081821	Total/NA	Solid	3050B	
160-43124-3	FSS-060-081821	Total/NA	Solid	3050B	
160-43124-4	FSS-260-081821	Total/NA	Solid	3050B	
160-43124-5	FSS-061-081821	Total/NA	Solid	3050B	
160-43124-6	FSS-261-081821	Total/NA	Solid	3050B	
160-43124-7	FSS-062-081821	Total/NA	Solid	3050B	
160-43124-8	FSS-063-081821	Total/NA	Solid	3050B	
160-43124-9	FSS-064-081821	Total/NA	Solid	3050B	
160-43124-11	FSS-065-081821	Total/NA	Solid	3050B	
160-43124-12	FSS-066-081821	Total/NA	Solid	3050B	
160-43124-13	FSS-181-081821	Total/NA	Solid	3050B	
160-43124-14	FSS-067-081821	Total/NA	Solid	3050B	
160-43124-15	FSS-068-081821	Total/NA	Solid	3050B	
160-43124-16	FSS-069-081821	Total/NA	Solid	3050B	
160-43124-17	FSS-070-081821	Total/NA	Solid	3050B	
160-43124-18	FSS-071-081821	Total/NA	Solid	3050B	
160-43124-19	FSS-072-081821	Total/NA	Solid	3050B	
160-43124-20	FSS-073-081821	Total/NA	Solid	3050B	
160-43124-21	FSS-074-081821	Total/NA	Solid	3050B	
MB 280-549127/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549127/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43124-1 MS	FSS-059-081821	Total/NA	Solid	3050B	
160-43124-1 MSD	FSS-059-081821	Total/NA	Solid	3050B	

Prep Batch: 549129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-22	FSS-075-081821	Total/NA	Solid	3050B	
160-43124-23	FSS-076-081821	Total/NA	Solid	3050B	
160-43124-24	FSS-077-081821	Total/NA	Solid	3050B	
160-43124-25	FSS-078-081821	Total/NA	Solid	3050B	
160-43124-26	FSS-079-081821	Total/NA	Solid	3050B	
160-43124-27	FSS-279-081821	Total/NA	Solid	3050B	
160-43124-28	FSS-080-081821	Total/NA	Solid	3050B	
160-43124-29	FSS-280-081821	Total/NA	Solid	3050B	
160-43124-30	FSS-081-081821	Total/NA	Solid	3050B	
160-43124-31	FSS-281-081821	Total/NA	Solid	3050B	
MB 280-549129/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549129/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43124-22 MS	FSS-075-081821	Total/NA	Solid	3050B	
160-43124-22 MSD	FSS-075-081821	Total/NA	Solid	3050B	

Prep Batch: 549358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	7471B	
160-43124-2	FSS-259-081821	Total/NA	Solid	7471B	
160-43124-3	FSS-060-081821	Total/NA	Solid	7471B	
160-43124-4	FSS-260-081821	Total/NA	Solid	7471B	
160-43124-5	FSS-061-081821	Total/NA	Solid	7471B	
160-43124-6	FSS-261-081821	Total/NA	Solid	7471B	
MB 280-549358/1-A	Method Blank	Total/NA	Solid	7471B	

Metals (Continued)

Prep Batch: 549358 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-549358/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549358/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
280-152426-A-16-H MS	Matrix Spike	Total/NA	Solid	7471B	
280-152426-A-16-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Prep Batch: 549360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-7	FSS-062-081821	Total/NA	Solid	7471B	
160-43124-8	FSS-063-081821	Total/NA	Solid	7471B	
160-43124-9	FSS-064-081821	Total/NA	Solid	7471B	
160-43124-11	FSS-065-081821	Total/NA	Solid	7471B	
160-43124-12	FSS-066-081821	Total/NA	Solid	7471B	
160-43124-13	FSS-181-081821	Total/NA	Solid	7471B	
160-43124-14	FSS-067-081821	Total/NA	Solid	7471B	
160-43124-15	FSS-068-081821	Total/NA	Solid	7471B	
160-43124-16	FSS-069-081821	Total/NA	Solid	7471B	
160-43124-17	FSS-070-081821	Total/NA	Solid	7471B	
160-43124-18	FSS-071-081821	Total/NA	Solid	7471B	
160-43124-19	FSS-072-081821	Total/NA	Solid	7471B	
160-43124-20	FSS-073-081821	Total/NA	Solid	7471B	
160-43124-21	FSS-074-081821	Total/NA	Solid	7471B	
160-43124-22	FSS-075-081821	Total/NA	Solid	7471B	
160-43124-23	FSS-076-081821	Total/NA	Solid	7471B	
160-43124-24	FSS-077-081821	Total/NA	Solid	7471B	
160-43124-25	FSS-078-081821	Total/NA	Solid	7471B	
160-43124-26	FSS-079-081821	Total/NA	Solid	7471B	
160-43124-27	FSS-279-081821	Total/NA	Solid	7471B	
MB 280-549360/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549360/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549360/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43124-7 MS	FSS-062-081821	Total/NA	Solid	7471B	
160-43124-7 MSD	FSS-062-081821	Total/NA	Solid	7471B	

Prep Batch: 549362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-28	FSS-080-081821	Total/NA	Solid	7471B	
160-43124-29	FSS-280-081821	Total/NA	Solid	7471B	
160-43124-30	FSS-081-081821	Total/NA	Solid	7471B	
160-43124-31	FSS-281-081821	Total/NA	Solid	7471B	
MB 280-549362/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549362/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549362/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43254-B-3-B MS	Matrix Spike	Total/NA	Solid	7471B	
160-43254-B-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 549718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	6020B	549127
160-43124-2	FSS-259-081821	Total/NA	Solid	6020B	549127
160-43124-3	FSS-060-081821	Total/NA	Solid	6020B	549127
160-43124-4	FSS-260-081821	Total/NA	Solid	6020B	549127

Metals (Continued)

Analysis Batch: 549718 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-5	FSS-061-081821	Total/NA	Solid	6020B	549127
160-43124-6	FSS-261-081821	Total/NA	Solid	6020B	549127
160-43124-7	FSS-062-081821	Total/NA	Solid	6020B	549127
160-43124-8	FSS-063-081821	Total/NA	Solid	6020B	549127
160-43124-9	FSS-064-081821	Total/NA	Solid	6020B	549127
160-43124-11	FSS-065-081821	Total/NA	Solid	6020B	549127
160-43124-12	FSS-066-081821	Total/NA	Solid	6020B	549127
160-43124-13	FSS-181-081821	Total/NA	Solid	6020B	549127
160-43124-14	FSS-067-081821	Total/NA	Solid	6020B	549127
160-43124-15	FSS-068-081821	Total/NA	Solid	6020B	549127
160-43124-16	FSS-069-081821	Total/NA	Solid	6020B	549127
160-43124-17	FSS-070-081821	Total/NA	Solid	6020B	549127
160-43124-18	FSS-071-081821	Total/NA	Solid	6020B	549127
160-43124-19	FSS-072-081821	Total/NA	Solid	6020B	549127
160-43124-20	FSS-073-081821	Total/NA	Solid	6020B	549127
160-43124-21	FSS-074-081821	Total/NA	Solid	6020B	549127
160-43124-22	FSS-075-081821	Total/NA	Solid	6020B	549129
160-43124-23	FSS-076-081821	Total/NA	Solid	6020B	549129
160-43124-24	FSS-077-081821	Total/NA	Solid	6020B	549129
160-43124-25	FSS-078-081821	Total/NA	Solid	6020B	549129
160-43124-26	FSS-079-081821	Total/NA	Solid	6020B	549129
160-43124-27	FSS-279-081821	Total/NA	Solid	6020B	549129
160-43124-28	FSS-080-081821	Total/NA	Solid	6020B	549129
160-43124-29	FSS-280-081821	Total/NA	Solid	6020B	549129
160-43124-30	FSS-081-081821	Total/NA	Solid	6020B	549129
160-43124-31	FSS-281-081821	Total/NA	Solid	6020B	549129
MB 280-549127/1-A	Method Blank	Total/NA	Solid	6020B	549127
MB 280-549129/1-A	Method Blank	Total/NA	Solid	6020B	549129
LCS 280-549127/2-A	Lab Control Sample	Total/NA	Solid	6020B	549127
LCS 280-549129/2-A	Lab Control Sample	Total/NA	Solid	6020B	549129
160-43124-1 MS	FSS-059-081821	Total/NA	Solid	6020B	549127
160-43124-1 MSD	FSS-059-081821	Total/NA	Solid	6020B	549127
160-43124-22 MS	FSS-075-081821	Total/NA	Solid	6020B	549129
160-43124-22 MSD	FSS-075-081821	Total/NA	Solid	6020B	549129

Analysis Batch: 549897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	7471B	549358
160-43124-2	FSS-259-081821	Total/NA	Solid	7471B	549358
160-43124-3	FSS-060-081821	Total/NA	Solid	7471B	549358
160-43124-4	FSS-260-081821	Total/NA	Solid	7471B	549358
160-43124-5	FSS-061-081821	Total/NA	Solid	7471B	549358
160-43124-6	FSS-261-081821	Total/NA	Solid	7471B	549358
160-43124-7	FSS-062-081821	Total/NA	Solid	7471B	549360
160-43124-8	FSS-063-081821	Total/NA	Solid	7471B	549360
160-43124-9	FSS-064-081821	Total/NA	Solid	7471B	549360
160-43124-11	FSS-065-081821	Total/NA	Solid	7471B	549360
160-43124-12	FSS-066-081821	Total/NA	Solid	7471B	549360
160-43124-13	FSS-181-081821	Total/NA	Solid	7471B	549360
160-43124-14	FSS-067-081821	Total/NA	Solid	7471B	549360
160-43124-15	FSS-068-081821	Total/NA	Solid	7471B	549360

Metals (Continued)

Analysis Batch: 549897 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-16	FSS-069-081821	Total/NA	Solid	7471B	549360
160-43124-17	FSS-070-081821	Total/NA	Solid	7471B	549360
160-43124-18	FSS-071-081821	Total/NA	Solid	7471B	549360
160-43124-19	FSS-072-081821	Total/NA	Solid	7471B	549360
160-43124-20	FSS-073-081821	Total/NA	Solid	7471B	549360
160-43124-21	FSS-074-081821	Total/NA	Solid	7471B	549360
160-43124-22	FSS-075-081821	Total/NA	Solid	7471B	549360
160-43124-23	FSS-076-081821	Total/NA	Solid	7471B	549360
160-43124-24	FSS-077-081821	Total/NA	Solid	7471B	549360
160-43124-25	FSS-078-081821	Total/NA	Solid	7471B	549360
160-43124-26	FSS-079-081821	Total/NA	Solid	7471B	549360
160-43124-27	FSS-279-081821	Total/NA	Solid	7471B	549360
160-43124-28	FSS-080-081821	Total/NA	Solid	7471B	549362
160-43124-29	FSS-280-081821	Total/NA	Solid	7471B	549362
160-43124-30	FSS-081-081821	Total/NA	Solid	7471B	549362
160-43124-31	FSS-281-081821	Total/NA	Solid	7471B	549362
MB 280-549358/1-A	Method Blank	Total/NA	Solid	7471B	549358
MB 280-549360/1-A	Method Blank	Total/NA	Solid	7471B	549360
MB 280-549362/1-A	Method Blank	Total/NA	Solid	7471B	549362
LCS 280-549358/2-A	Lab Control Sample	Total/NA	Solid	7471B	549358
LCS 280-549360/2-A	Lab Control Sample	Total/NA	Solid	7471B	549360
LCS 280-549362/2-A	Lab Control Sample	Total/NA	Solid	7471B	549362
LCSD 280-549358/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549358
LCSD 280-549360/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549360
LCSD 280-549362/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549362
160-43124-7 MS	FSS-062-081821	Total/NA	Solid	7471B	549360
160-43124-7 MSD	FSS-062-081821	Total/NA	Solid	7471B	549360
160-43254-B-3-B MS	Matrix Spike	Total/NA	Solid	7471B	549362
160-43254-B-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	549362
280-152426-A-16-H MS	Matrix Spike	Total/NA	Solid	7471B	549358
280-152426-A-16-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	549358

General Chemistry

Analysis Batch: 548564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Moisture	
160-43124-2	FSS-259-081821	Total/NA	Solid	Moisture	
160-43124-3	FSS-060-081821	Total/NA	Solid	Moisture	
160-43124-4	FSS-260-081821	Total/NA	Solid	Moisture	
160-43124-5	FSS-061-081821	Total/NA	Solid	Moisture	
160-43124-6	FSS-261-081821	Total/NA	Solid	Moisture	
160-43124-7	FSS-062-081821	Total/NA	Solid	Moisture	
160-43124-8	FSS-063-081821	Total/NA	Solid	Moisture	
160-43124-9	FSS-064-081821	Total/NA	Solid	Moisture	
160-43124-11	FSS-065-081821	Total/NA	Solid	Moisture	
160-43124-12	FSS-066-081821	Total/NA	Solid	Moisture	
160-43124-13	FSS-181-081821	Total/NA	Solid	Moisture	
160-43124-14	FSS-067-081821	Total/NA	Solid	Moisture	
160-43124-15	FSS-068-081821	Total/NA	Solid	Moisture	
160-43124-16	FSS-069-081821	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 548564 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-17	FSS-070-081821	Total/NA	Solid	Moisture	
160-43124-18	FSS-071-081821	Total/NA	Solid	Moisture	
160-43124-19	FSS-072-081821	Total/NA	Solid	Moisture	
160-43124-20	FSS-073-081821	Total/NA	Solid	Moisture	
160-43124-21	FSS-074-081821	Total/NA	Solid	Moisture	
160-43124-22	FSS-075-081821	Total/NA	Solid	Moisture	
160-43124-23	FSS-076-081821	Total/NA	Solid	Moisture	
160-43124-24	FSS-077-081821	Total/NA	Solid	Moisture	
160-43124-25	FSS-078-081821	Total/NA	Solid	Moisture	
160-43124-26	FSS-079-081821	Total/NA	Solid	Moisture	
160-43124-27	FSS-279-081821	Total/NA	Solid	Moisture	
160-43124-28	FSS-080-081821	Total/NA	Solid	Moisture	
160-43124-29	FSS-280-081821	Total/NA	Solid	Moisture	
160-43124-30	FSS-081-081821	Total/NA	Solid	Moisture	
160-43124-31	FSS-281-081821	Total/NA	Solid	Moisture	
160-43124-1 DU	FSS-059-081821	Total/NA	Solid	Moisture	

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-D-9-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 523723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Dry and Grind	
160-43124-2	FSS-259-081821	Total/NA	Solid	Dry and Grind	
160-43124-3	FSS-060-081821	Total/NA	Solid	Dry and Grind	
160-43124-4	FSS-260-081821	Total/NA	Solid	Dry and Grind	
160-43124-5	FSS-061-081821	Total/NA	Solid	Dry and Grind	
160-43124-6	FSS-261-081821	Total/NA	Solid	Dry and Grind	
160-43124-7	FSS-062-081821	Total/NA	Solid	Dry and Grind	
160-43124-8	FSS-063-081821	Total/NA	Solid	Dry and Grind	
160-43124-9	FSS-064-081821	Total/NA	Solid	Dry and Grind	
160-43124-10	HFBR-021-061821	Total/NA	Solid	Dry and Grind	
160-43124-11	FSS-065-081821	Total/NA	Solid	Dry and Grind	
160-43124-12	FSS-066-081821	Total/NA	Solid	Dry and Grind	
160-43124-13	FSS-181-081821	Total/NA	Solid	Dry and Grind	
160-43124-14	FSS-067-081821	Total/NA	Solid	Dry and Grind	
160-43124-15	FSS-068-081821	Total/NA	Solid	Dry and Grind	
160-43124-16	FSS-069-081821	Total/NA	Solid	Dry and Grind	
160-43124-17	FSS-070-081821	Total/NA	Solid	Dry and Grind	
160-43124-18	FSS-071-081821	Total/NA	Solid	Dry and Grind	
160-43124-19	FSS-072-081821	Total/NA	Solid	Dry and Grind	
160-43124-20	FSS-073-081821	Total/NA	Solid	Dry and Grind	
160-43124-21	FSS-074-081821	Total/NA	Solid	Dry and Grind	
160-43124-22	FSS-075-081821	Total/NA	Solid	Dry and Grind	
160-43124-23	FSS-076-081821	Total/NA	Solid	Dry and Grind	
160-43124-24	FSS-077-081821	Total/NA	Solid	Dry and Grind	
160-43124-25	FSS-078-081821	Total/NA	Solid	Dry and Grind	
160-43124-26	FSS-079-081821	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 523723 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-27	FSS-279-081821	Total/NA	Solid	Dry and Grind	
160-43124-28	FSS-080-081821	Total/NA	Solid	Dry and Grind	
160-43124-29	FSS-280-081821	Total/NA	Solid	Dry and Grind	
160-43124-30	FSS-081-081821	Total/NA	Solid	Dry and Grind	
160-43124-31	FSS-281-081821	Total/NA	Solid	Dry and Grind	
160-43124-6 DU	FSS-261-081821	Total/NA	Solid	Dry and Grind	
160-43124-7 DU	FSS-062-081821	Total/NA	Solid	Dry and Grind	
160-43124-20 DU	FSS-073-081821	Total/NA	Solid	Dry and Grind	
160-43124-27 DU	FSS-279-081821	Total/NA	Solid	Dry and Grind	

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Dry and Grind	
160-43124-2	FSS-259-081821	Total/NA	Solid	Dry and Grind	
160-43124-3	FSS-060-081821	Total/NA	Solid	Dry and Grind	
160-43124-4	FSS-260-081821	Total/NA	Solid	Dry and Grind	
160-43124-5	FSS-061-081821	Total/NA	Solid	Dry and Grind	
160-43124-6	FSS-261-081821	Total/NA	Solid	Dry and Grind	
160-43124-7	FSS-062-081821	Total/NA	Solid	Dry and Grind	
160-43124-8	FSS-063-081821	Total/NA	Solid	Dry and Grind	
160-43124-9	FSS-064-081821	Total/NA	Solid	Dry and Grind	
160-43124-10	HFBR-021-061821	Total/NA	Solid	Dry and Grind	
160-43124-11	FSS-065-081821	Total/NA	Solid	Dry and Grind	
160-43124-12	FSS-066-081821	Total/NA	Solid	Dry and Grind	
160-43124-13	FSS-181-081821	Total/NA	Solid	Dry and Grind	
160-43124-14	FSS-067-081821	Total/NA	Solid	Dry and Grind	
160-43124-15	FSS-068-081821	Total/NA	Solid	Dry and Grind	
160-43124-16	FSS-069-081821	Total/NA	Solid	Dry and Grind	
160-43124-17	FSS-070-081821	Total/NA	Solid	Dry and Grind	
160-43124-18	FSS-071-081821	Total/NA	Solid	Dry and Grind	
160-43124-19	FSS-072-081821	Total/NA	Solid	Dry and Grind	
160-43124-20	FSS-073-081821	Total/NA	Solid	Dry and Grind	
160-43124-21	FSS-074-081821	Total/NA	Solid	Dry and Grind	
160-43124-22	FSS-075-081821	Total/NA	Solid	Dry and Grind	
160-43124-23	FSS-076-081821	Total/NA	Solid	Dry and Grind	
160-43124-24	FSS-077-081821	Total/NA	Solid	Dry and Grind	
160-43124-25	FSS-078-081821	Total/NA	Solid	Dry and Grind	
160-43124-26	FSS-079-081821	Total/NA	Solid	Dry and Grind	
160-43124-27	FSS-279-081821	Total/NA	Solid	Dry and Grind	
160-43124-28	FSS-080-081821	Total/NA	Solid	Dry and Grind	
160-43124-29	FSS-280-081821	Total/NA	Solid	Dry and Grind	
160-43124-30	FSS-081-081821	Total/NA	Solid	Dry and Grind	
160-43124-31	FSS-281-081821	Total/NA	Solid	Dry and Grind	
160-43124-1 DU	FSS-059-081821	Total/NA	Solid	Dry and Grind	
160-43124-2 DU	FSS-259-081821	Total/NA	Solid	Dry and Grind	
160-43124-6 DU	FSS-261-081821	Total/NA	Solid	Dry and Grind	
160-43124-7 DU	FSS-062-081821	Total/NA	Solid	Dry and Grind	
160-43124-21 DU	FSS-074-081821	Total/NA	Solid	Dry and Grind	
160-43124-26 DU	FSS-079-081821	Total/NA	Solid	Dry and Grind	
160-43124-27 DU	FSS-279-081821	Total/NA	Solid	Dry and Grind	

Rad

Prep Batch: 524240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-2	FSS-259-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-3	FSS-060-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-4	FSS-260-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-5	FSS-061-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-6	FSS-261-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-7	FSS-062-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-8	FSS-063-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-9	FSS-064-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-10	HFBR-021-061821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-11	FSS-065-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-12	FSS-066-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-13	FSS-181-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-14	FSS-067-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-15	FSS-068-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-16	FSS-069-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-17	FSS-070-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-18	FSS-071-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-19	FSS-072-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-20	FSS-073-081821	Total/NA	Solid	Fill_Geo-21	523723
MB 160-524240/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-524240/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43124-20 DU	FSS-073-081821	Total/NA	Solid	Fill_Geo-21	523723

Prep Batch: 524254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-21	FSS-074-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-22	FSS-075-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-23	FSS-076-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-24	FSS-077-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-25	FSS-078-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-26	FSS-079-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-27	FSS-279-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-28	FSS-080-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-29	FSS-280-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-30	FSS-081-081821	Total/NA	Solid	Fill_Geo-21	523723
160-43124-31	FSS-281-081821	Total/NA	Solid	Fill_Geo-21	523723
MB 160-524254/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-524254/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43154-D-9-F DU	Duplicate	Total/NA	Solid	Fill_Geo-21	523700

Prep Batch: 524992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	ExtChrom	524231
160-43124-2	FSS-259-081821	Total/NA	Solid	ExtChrom	524231
160-43124-3	FSS-060-081821	Total/NA	Solid	ExtChrom	524231
160-43124-4	FSS-260-081821	Total/NA	Solid	ExtChrom	524231
160-43124-5	FSS-061-081821	Total/NA	Solid	ExtChrom	524231
160-43124-6	FSS-261-081821	Total/NA	Solid	ExtChrom	524231
MB 160-524992/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524992/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	

Rad (Continued)

Prep Batch: 524992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-6 DU	FSS-261-081821	Total/NA	Solid	ExtChrom	524231

Prep Batch: 524999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	ExtChrom	523723
160-43124-2	FSS-259-081821	Total/NA	Solid	ExtChrom	523723
160-43124-3	FSS-060-081821	Total/NA	Solid	ExtChrom	523723
160-43124-4	FSS-260-081821	Total/NA	Solid	ExtChrom	523723
160-43124-5	FSS-061-081821	Total/NA	Solid	ExtChrom	523723
160-43124-6	FSS-261-081821	Total/NA	Solid	ExtChrom	523723
MB 160-524999/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-524999/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-6 DU	FSS-261-081821	Total/NA	Solid	ExtChrom	523723

Prep Batch: 525000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Leach_Precip	
160-43124-2	FSS-259-081821	Total/NA	Solid	Leach_Precip	
160-43124-3	FSS-060-081821	Total/NA	Solid	Leach_Precip	
160-43124-4	FSS-260-081821	Total/NA	Solid	Leach_Precip	
160-43124-5	FSS-061-081821	Total/NA	Solid	Leach_Precip	
160-43124-6	FSS-261-081821	Total/NA	Solid	Leach_Precip	
MB 160-525000/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525000/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-6 DU	FSS-261-081821	Total/NA	Solid	Leach_Precip	

Prep Batch: 525614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-7	FSS-062-081821	Total/NA	Solid	ExtChrom	524231
160-43124-8	FSS-063-081821	Total/NA	Solid	ExtChrom	524231
160-43124-9	FSS-064-081821	Total/NA	Solid	ExtChrom	524231
160-43124-10	HFBR-021-061821	Total/NA	Solid	ExtChrom	524231
160-43124-11	FSS-065-081821	Total/NA	Solid	ExtChrom	524231
160-43124-12	FSS-066-081821	Total/NA	Solid	ExtChrom	524231
160-43124-13	FSS-181-081821	Total/NA	Solid	ExtChrom	524231
160-43124-14	FSS-067-081821	Total/NA	Solid	ExtChrom	524231
160-43124-15	FSS-068-081821	Total/NA	Solid	ExtChrom	524231
160-43124-16	FSS-069-081821	Total/NA	Solid	ExtChrom	524231
160-43124-17	FSS-070-081821	Total/NA	Solid	ExtChrom	524231
160-43124-18	FSS-071-081821	Total/NA	Solid	ExtChrom	524231
160-43124-19	FSS-072-081821	Total/NA	Solid	ExtChrom	524231
160-43124-20	FSS-073-081821	Total/NA	Solid	ExtChrom	524231
160-43124-21	FSS-074-081821	Total/NA	Solid	ExtChrom	524231
160-43124-22	FSS-075-081821	Total/NA	Solid	ExtChrom	524231
160-43124-23	FSS-076-081821	Total/NA	Solid	ExtChrom	524231
160-43124-24	FSS-077-081821	Total/NA	Solid	ExtChrom	524231
160-43124-25	FSS-078-081821	Total/NA	Solid	ExtChrom	524231
160-43124-26	FSS-079-081821	Total/NA	Solid	ExtChrom	524231
MB 160-525614/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525614/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-7 DU	FSS-062-081821	Total/NA	Solid	ExtChrom	524231

Rad

Prep Batch: 525615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-27	FSS-279-081821	Total/NA	Solid	ExtChrom	524231
160-43124-28	FSS-080-081821	Total/NA	Solid	ExtChrom	524231
160-43124-29	FSS-280-081821	Total/NA	Solid	ExtChrom	524231
160-43124-30	FSS-081-081821	Total/NA	Solid	ExtChrom	524231
160-43124-31	FSS-281-081821	Total/NA	Solid	ExtChrom	524231
MB 160-525615/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525615/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-27 DU	FSS-279-081821	Total/NA	Solid	ExtChrom	524231

Prep Batch: 525620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-7	FSS-062-081821	Total/NA	Solid	Leach_Precip	
160-43124-8	FSS-063-081821	Total/NA	Solid	Leach_Precip	
160-43124-9	FSS-064-081821	Total/NA	Solid	Leach_Precip	
160-43124-10	HFBR-021-061821	Total/NA	Solid	Leach_Precip	
160-43124-11	FSS-065-081821	Total/NA	Solid	Leach_Precip	
160-43124-12	FSS-066-081821	Total/NA	Solid	Leach_Precip	
160-43124-13	FSS-181-081821	Total/NA	Solid	Leach_Precip	
160-43124-14	FSS-067-081821	Total/NA	Solid	Leach_Precip	
160-43124-15	FSS-068-081821	Total/NA	Solid	Leach_Precip	
160-43124-16	FSS-069-081821	Total/NA	Solid	Leach_Precip	
160-43124-17	FSS-070-081821	Total/NA	Solid	Leach_Precip	
160-43124-18	FSS-071-081821	Total/NA	Solid	Leach_Precip	
160-43124-19	FSS-072-081821	Total/NA	Solid	Leach_Precip	
160-43124-20	FSS-073-081821	Total/NA	Solid	Leach_Precip	
160-43124-21	FSS-074-081821	Total/NA	Solid	Leach_Precip	
160-43124-22	FSS-075-081821	Total/NA	Solid	Leach_Precip	
160-43124-23	FSS-076-081821	Total/NA	Solid	Leach_Precip	
160-43124-24	FSS-077-081821	Total/NA	Solid	Leach_Precip	
160-43124-25	FSS-078-081821	Total/NA	Solid	Leach_Precip	
160-43124-26	FSS-079-081821	Total/NA	Solid	Leach_Precip	
MB 160-525620/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525620/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-7 DU	FSS-062-081821	Total/NA	Solid	Leach_Precip	

Prep Batch: 525621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-27	FSS-279-081821	Total/NA	Solid	Leach_Precip	
160-43124-28	FSS-080-081821	Total/NA	Solid	Leach_Precip	
160-43124-29	FSS-280-081821	Total/NA	Solid	Leach_Precip	
160-43124-30	FSS-081-081821	Total/NA	Solid	Leach_Precip	
160-43124-31	FSS-281-081821	Total/NA	Solid	Leach_Precip	
MB 160-525621/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525621/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-27 DU	FSS-279-081821	Total/NA	Solid	Leach_Precip	

Prep Batch: 525622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-27	FSS-279-081821	Total/NA	Solid	ExtChrom	523723
160-43124-28	FSS-080-081821	Total/NA	Solid	ExtChrom	523723
160-43124-29	FSS-280-081821	Total/NA	Solid	ExtChrom	523723

Rad (Continued)

Prep Batch: 525622 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-30	FSS-081-081821	Total/NA	Solid	ExtChrom	523723
160-43124-31	FSS-281-081821	Total/NA	Solid	ExtChrom	523723
MB 160-525622/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525622/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-27 DU	FSS-279-081821	Total/NA	Solid	ExtChrom	523723

Prep Batch: 525623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-7	FSS-062-081821	Total/NA	Solid	ExtChrom	523723
160-43124-8	FSS-063-081821	Total/NA	Solid	ExtChrom	523723
160-43124-9	FSS-064-081821	Total/NA	Solid	ExtChrom	523723
160-43124-10	HFBR-021-061821	Total/NA	Solid	ExtChrom	523723
160-43124-11	FSS-065-081821	Total/NA	Solid	ExtChrom	523723
160-43124-12	FSS-066-081821	Total/NA	Solid	ExtChrom	523723
160-43124-13	FSS-181-081821	Total/NA	Solid	ExtChrom	523723
160-43124-14	FSS-067-081821	Total/NA	Solid	ExtChrom	523723
160-43124-15	FSS-068-081821	Total/NA	Solid	ExtChrom	523723
160-43124-16	FSS-069-081821	Total/NA	Solid	ExtChrom	523723
160-43124-17	FSS-070-081821	Total/NA	Solid	ExtChrom	523723
160-43124-18	FSS-071-081821	Total/NA	Solid	ExtChrom	523723
160-43124-19	FSS-072-081821	Total/NA	Solid	ExtChrom	523723
160-43124-20	FSS-073-081821	Total/NA	Solid	ExtChrom	523723
160-43124-21	FSS-074-081821	Total/NA	Solid	ExtChrom	523723
160-43124-22	FSS-075-081821	Total/NA	Solid	ExtChrom	523723
160-43124-23	FSS-076-081821	Total/NA	Solid	ExtChrom	523723
160-43124-24	FSS-077-081821	Total/NA	Solid	ExtChrom	523723
160-43124-25	FSS-078-081821	Total/NA	Solid	ExtChrom	523723
160-43124-26	FSS-079-081821	Total/NA	Solid	ExtChrom	523723
MB 160-525623/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525623/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-7 DU	FSS-062-081821	Total/NA	Solid	ExtChrom	523723

Prep Batch: 526077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-2	FSS-259-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-3	FSS-060-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-4	FSS-260-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-5	FSS-061-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-6	FSS-261-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-7	FSS-062-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-8	FSS-063-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-9	FSS-064-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-10	HFBR-021-061821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-11	FSS-065-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-12	FSS-066-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-13	FSS-181-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-14	FSS-067-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-15	FSS-068-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-16	FSS-069-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-17	FSS-070-081821	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 526077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-18	FSS-071-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-19	FSS-072-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526077/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526077/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43124-18 MS	FSS-071-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-19 DU	FSS-072-081821	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 526079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-20	FSS-073-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-21	FSS-074-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-22	FSS-075-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-23	FSS-076-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-24	FSS-077-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-25	FSS-078-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-26	FSS-079-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-27	FSS-279-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-28	FSS-080-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-29	FSS-280-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-30	FSS-081-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-31	FSS-281-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526079/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526079/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43124-30 MS	FSS-081-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-31 DU	FSS-281-081821	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 526201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-2	FSS-259-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-3	FSS-060-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-4	FSS-260-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-5	FSS-061-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-6	FSS-261-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-7	FSS-062-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-8	FSS-063-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-9	FSS-064-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-10	HFBR-021-061821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-11	FSS-065-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-12	FSS-066-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-13	FSS-181-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-14	FSS-067-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-15	FSS-068-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-16	FSS-069-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-17	FSS-070-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-18	FSS-071-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-19	FSS-072-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-20	FSS-073-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
MB 160-526201/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-526201/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43124-2 DU	FSS-259-081821	Total/NA	Solid	Ext_Chrom_LSC	524231

Rad

Prep Batch: 526820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-21	FSS-074-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-22	FSS-075-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-23	FSS-076-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-24	FSS-077-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-25	FSS-078-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-26	FSS-079-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-27	FSS-279-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-28	FSS-080-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-29	FSS-280-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-30	FSS-081-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
160-43124-31	FSS-281-081821	Total/NA	Solid	Ext_Chrom_LSC	524231
MB 160-526820/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-526820/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43124-26 DU	FSS-079-081821	Total/NA	Solid	Ext_Chrom_LSC	524231

Prep Batch: 527261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-2	FSS-259-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-3	FSS-060-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-4	FSS-260-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-5	FSS-061-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-6	FSS-261-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527261/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527261/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43124-1 MS	FSS-059-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-1 DU	FSS-059-081821	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-7	FSS-062-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-8	FSS-063-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-9	FSS-064-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-10	HFBR-021-061821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-11	FSS-065-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-12	FSS-066-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-13	FSS-181-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-14	FSS-067-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-15	FSS-068-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527451/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527451/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43113-C-1-D MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43113-C-1-C DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-21	FSS-074-081821	Total/NA	Solid	DPS-7	524231
160-43124-22	FSS-075-081821	Total/NA	Solid	DPS-7	524231
160-43124-23	FSS-076-081821	Total/NA	Solid	DPS-7	524231
160-43124-24	FSS-077-081821	Total/NA	Solid	DPS-7	524231
160-43124-25	FSS-078-081821	Total/NA	Solid	DPS-7	524231

Rad (Continued)

Prep Batch: 527607 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-26	FSS-079-081821	Total/NA	Solid	DPS-7	524231
160-43124-27	FSS-279-081821	Total/NA	Solid	DPS-7	524231
160-43124-28	FSS-080-081821	Total/NA	Solid	DPS-7	524231
160-43124-29	FSS-280-081821	Total/NA	Solid	DPS-7	524231
160-43124-30	FSS-081-081821	Total/NA	Solid	DPS-7	524231
160-43124-31	FSS-281-081821	Total/NA	Solid	DPS-7	524231
MB 160-527607/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527607/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43124-21 DU	FSS-074-081821	Total/NA	Solid	DPS-7	524231

Prep Batch: 527608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-1	FSS-059-081821	Total/NA	Solid	DPS-7	524231
160-43124-2	FSS-259-081821	Total/NA	Solid	DPS-7	524231
160-43124-3	FSS-060-081821	Total/NA	Solid	DPS-7	524231
160-43124-4	FSS-260-081821	Total/NA	Solid	DPS-7	524231
160-43124-5	FSS-061-081821	Total/NA	Solid	DPS-7	524231
160-43124-6	FSS-261-081821	Total/NA	Solid	DPS-7	524231
160-43124-7	FSS-062-081821	Total/NA	Solid	DPS-7	524231
160-43124-8	FSS-063-081821	Total/NA	Solid	DPS-7	524231
160-43124-9	FSS-064-081821	Total/NA	Solid	DPS-7	524231
160-43124-10	HFBR-021-061821	Total/NA	Solid	DPS-7	524231
160-43124-11	FSS-065-081821	Total/NA	Solid	DPS-7	524231
160-43124-12	FSS-066-081821	Total/NA	Solid	DPS-7	524231
160-43124-13	FSS-181-081821	Total/NA	Solid	DPS-7	524231
160-43124-14	FSS-067-081821	Total/NA	Solid	DPS-7	524231
160-43124-15	FSS-068-081821	Total/NA	Solid	DPS-7	524231
160-43124-16	FSS-069-081821	Total/NA	Solid	DPS-7	524231
160-43124-17	FSS-070-081821	Total/NA	Solid	DPS-7	524231
160-43124-18	FSS-071-081821	Total/NA	Solid	DPS-7	524231
160-43124-19	FSS-072-081821	Total/NA	Solid	DPS-7	524231
160-43124-20	FSS-073-081821	Total/NA	Solid	DPS-7	524231
MB 160-527608/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527608/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43124-1 DU	FSS-059-081821	Total/NA	Solid	DPS-7	524231

Prep Batch: 527642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-16	FSS-069-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-17	FSS-070-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-18	FSS-071-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-19	FSS-072-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-20	FSS-073-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-21	FSS-074-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-22	FSS-075-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-23	FSS-076-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-24	FSS-077-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-25	FSS-078-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-26	FSS-079-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-27	FSS-279-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527642/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 527642 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-527642/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43124-16 MS	FSS-069-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-16 DU	FSS-069-081821	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-28	FSS-080-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-29	FSS-280-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-30	FSS-081-081821	Total/NA	Solid	LSC_Dist_Susp	
160-43124-31	FSS-281-081821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527842/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527842/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43154-D-1-N MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43154-D-1-M DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43124-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43124-1	FSS-059-081821	81.4	98.3
160-43124-1 DU	FSS-059-081821	79.8	98.3
160-43124-2	FSS-259-081821	81.6	103
160-43124-3	FSS-060-081821	82.6	101
160-43124-4	FSS-260-081821	78.3	102
160-43124-5	FSS-061-081821	82.3	101
160-43124-6	FSS-261-081821	81.0	102
160-43124-7	FSS-062-081821	78.0	89.7
160-43124-8	FSS-063-081821	78.9	102
160-43124-9	FSS-064-081821	80.8	101
160-43124-10	HFBR-021-061821	78.3	100
160-43124-11	FSS-065-081821	79.0	97.9
160-43124-12	FSS-066-081821	80.7	99.4
160-43124-13	FSS-181-081821	84.4	99.1
160-43124-14	FSS-067-081821	77.9	95.3
160-43124-15	FSS-068-081821	65.6	96.1
160-43124-16	FSS-069-081821	79.1	97.6
160-43124-17	FSS-070-081821	82.5	96.8
160-43124-18	FSS-071-081821	79.1	101
160-43124-19	FSS-072-081821	81.6	102
160-43124-20	FSS-073-081821	67.7	98.7
160-43124-21	FSS-074-081821	78.7	96.1
160-43124-21 DU	FSS-074-081821	75.6	95.7
160-43124-22	FSS-075-081821	71.7	97.9
160-43124-23	FSS-076-081821	78.0	94.6
160-43124-24	FSS-077-081821	74.6	95.0
160-43124-25	FSS-078-081821	75.9	98.7
160-43124-26	FSS-079-081821	75.6	99.4
160-43124-27	FSS-279-081821	73.4	98.7
160-43124-28	FSS-080-081821	67.8	98.3
160-43124-29	FSS-280-081821	77.2	97.2
160-43124-30	FSS-081-081821	71.1	98.7
160-43124-31	FSS-281-081821	72.0	97.2
LCS 160-527607/2-A	Lab Control Sample	87.7	94.2
LCS 160-527608/2-A	Lab Control Sample	101	99.1
MB 160-527607/1-A	Method Blank	83.7	97.2
MB 160-527608/1-A	Method Blank	86.6	96.8

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43124-1	FSS-059-081821	72.2
160-43124-2	FSS-259-081821	80.7

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43124-3	FSS-060-081821	65.7							
160-43124-4	FSS-260-081821	79.0							
160-43124-5	FSS-061-081821	90.9							
160-43124-6	FSS-261-081821	92.4							
160-43124-6 DU	FSS-261-081821	79.8							
160-43124-7	FSS-062-081821	109							
160-43124-7 DU	FSS-062-081821	98.6							
160-43124-8	FSS-063-081821	99.6							
160-43124-9	FSS-064-081821	98.5							
160-43124-10	HFBR-021-061821	101							
160-43124-11	FSS-065-081821	92.3							
160-43124-12	FSS-066-081821	95.8							
160-43124-13	FSS-181-081821	101							
160-43124-14	FSS-067-081821	102							
160-43124-15	FSS-068-081821	89.5							
160-43124-16	FSS-069-081821	87.9							
160-43124-17	FSS-070-081821	98.2							
160-43124-18	FSS-071-081821	91.5							
160-43124-19	FSS-072-081821	91.7							
160-43124-20	FSS-073-081821	91.0							
160-43124-21	FSS-074-081821	88.3							
160-43124-22	FSS-075-081821	82.4							
160-43124-23	FSS-076-081821	82.9							
160-43124-24	FSS-077-081821	88.8							
160-43124-25	FSS-078-081821	92.1							
160-43124-26	FSS-079-081821	88.7							
160-43124-27	FSS-279-081821	76.1							
160-43124-27 DU	FSS-279-081821	86.0							
160-43124-28	FSS-080-081821	91.2							
160-43124-29	FSS-280-081821	79.7							
160-43124-30	FSS-081-081821	81.8							
160-43124-31	FSS-281-081821	87.5							
LCS 160-524992/2-A	Lab Control Sample	94.1							
LCS 160-525614/2-A	Lab Control Sample	102							
LCS 160-525615/2-A	Lab Control Sample	79.6							
MB 160-524992/1-A	Method Blank	95.2							
MB 160-525614/1-A	Method Blank	95.4							
MB 160-525615/1-A	Method Blank	89.6							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	U-232 (30-110)							
160-43124-1	FSS-059-081821	71.3							
160-43124-2	FSS-259-081821	69.1							
160-43124-3	FSS-060-081821	62.5							

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43124-4	FSS-260-081821	74.7						
160-43124-5	FSS-061-081821	71.5						
160-43124-6	FSS-261-081821	72.3						
160-43124-6 DU	FSS-261-081821	66.2						
160-43124-7	FSS-062-081821	81.3						
160-43124-7 DU	FSS-062-081821	88.2						
160-43124-8	FSS-063-081821	86.5						
160-43124-9	FSS-064-081821	101						
160-43124-10	HFBR-021-061821	96.7						
160-43124-11	FSS-065-081821	83.9						
160-43124-12	FSS-066-081821	88.2						
160-43124-13	FSS-181-081821	94.3						
160-43124-14	FSS-067-081821	88.4						
160-43124-15	FSS-068-081821	83.6						
160-43124-16	FSS-069-081821	82.0						
160-43124-17	FSS-070-081821	79.5						
160-43124-18	FSS-071-081821	89.3						
160-43124-19	FSS-072-081821	83.3						
160-43124-20	FSS-073-081821	80.8						
160-43124-21	FSS-074-081821	85.3						
160-43124-22	FSS-075-081821	82.3						
160-43124-23	FSS-076-081821	90.6						
160-43124-24	FSS-077-081821	89.2						
160-43124-25	FSS-078-081821	81.7						
160-43124-26	FSS-079-081821	87.8						
160-43124-27	FSS-279-081821	67.8						
160-43124-27 DU	FSS-279-081821	72.3						
160-43124-28	FSS-080-081821	82.0						
160-43124-29	FSS-280-081821	78.6						
160-43124-30	FSS-081-081821	63.5						
160-43124-31	FSS-281-081821	68.9						
LCS 160-524999/2-A	Lab Control Sample	95.0						
LCS 160-525622/2-A	Lab Control Sample	84.7						
LCS 160-525623/2-A	Lab Control Sample	42.2						
MB 160-524999/1-A	Method Blank	102						
MB 160-525622/1-A	Method Blank	82.8						
MB 160-525623/1-A	Method Blank	103						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43124-1	FSS-059-081821	103						
160-43124-2	FSS-259-081821	101						
160-43124-2 DU	FSS-259-081821	103						
160-43124-3	FSS-060-081821	114 Q						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43124-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43124-4	FSS-260-081821	99.7						
160-43124-5	FSS-061-081821	98.3						
160-43124-6	FSS-261-081821	101						
160-43124-7	FSS-062-081821	105						
160-43124-8	FSS-063-081821	107						
160-43124-9	FSS-064-081821	105						
160-43124-10	HFBR-021-061821	110						
160-43124-11	FSS-065-081821	103						
160-43124-12	FSS-066-081821	107						
160-43124-13	FSS-181-081821	102						
160-43124-14	FSS-067-081821	106						
160-43124-15	FSS-068-081821	104						
160-43124-16	FSS-069-081821	107						
160-43124-17	FSS-070-081821	111 Q						
160-43124-18	FSS-071-081821	104						
160-43124-19	FSS-072-081821	105						
160-43124-20	FSS-073-081821	97.9						
160-43124-21	FSS-074-081821	98.2						
160-43124-22	FSS-075-081821	105						
160-43124-23	FSS-076-081821	89.9						
160-43124-24	FSS-077-081821	98.4						
160-43124-25	FSS-078-081821	96.3						
160-43124-26	FSS-079-081821	93.9						
160-43124-26 DU	FSS-079-081821	90.7						
160-43124-27	FSS-279-081821	90.9						
160-43124-28	FSS-080-081821	80.1						
160-43124-29	FSS-280-081821	99.3						
160-43124-30	FSS-081-081821	96.1						
160-43124-31	FSS-281-081821	101						
LCS 160-526201/2-A	Lab Control Sample	103						
LCS 160-526820/2-A	Lab Control Sample	93.2						
MB 160-526201/1-A	Method Blank	94.0						
MB 160-526820/1-A	Method Blank	98.9						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43124-1	FSS-059-081821	72.2						
160-43124-2	FSS-259-081821	80.7						
160-43124-3	FSS-060-081821	65.7						
160-43124-4	FSS-260-081821	79.0						
160-43124-5	FSS-061-081821	90.9						
160-43124-6	FSS-261-081821	92.4						
160-43124-6 DU	FSS-261-081821	79.8						
160-43124-7	FSS-062-081821	109						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43124-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43124-7 DU	FSS-062-081821	98.6						
160-43124-8	FSS-063-081821	99.6						
160-43124-9	FSS-064-081821	98.5						
160-43124-10	HFBR-021-061821	101						
160-43124-11	FSS-065-081821	92.3						
160-43124-12	FSS-066-081821	95.8						
160-43124-13	FSS-181-081821	101						
160-43124-14	FSS-067-081821	102						
160-43124-15	FSS-068-081821	89.5						
160-43124-16	FSS-069-081821	87.9						
160-43124-17	FSS-070-081821	98.2						
160-43124-18	FSS-071-081821	91.5						
160-43124-19	FSS-072-081821	91.7						
160-43124-20	FSS-073-081821	91.0						
160-43124-21	FSS-074-081821	88.3						
160-43124-22	FSS-075-081821	82.4						
160-43124-23	FSS-076-081821	82.9						
160-43124-24	FSS-077-081821	88.8						
160-43124-25	FSS-078-081821	92.1						
160-43124-26	FSS-079-081821	88.7						
160-43124-27	FSS-279-081821	76.1						
160-43124-27 DU	FSS-279-081821	86.0						
160-43124-28	FSS-080-081821	91.2						
160-43124-29	FSS-280-081821	79.7						
160-43124-30	FSS-081-081821	81.8						
160-43124-31	FSS-281-081821	87.5						
LCS 160-525000/2-A	Lab Control Sample	94.1						
LCS 160-525620/2-A	Lab Control Sample	102						
LCS 160-525621/2-A	Lab Control Sample	79.6						
MB 160-525000/1-A	Method Blank	95.2						
MB 160-525620/1-A	Method Blank	95.4						
MB 160-525621/1-A	Method Blank	89.6						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	10/01/2021
Sample Receipt Date	08/24/2021
RJ Lee Group Job No.	AOH1063223-0
Authorization/P.O. No.	
Client Job No./Name	160-43124-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546365.HPL	FSS-059-081821 (160-43124-1)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546366.HPL	FSS-259-081821 (160-43124-2)	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546367.HPL	FSS-060-081821 (160-43124-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546368.HPL	FSS-260-081821 (160-43124-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546369.HPL	FSS-061-081821 (160-43124-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546370.HPL	FSS-261-081821 (160-43124-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546371.HPL	FSS-062-081821 (160-43124-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546372.HPL	FSS-063-081821 (160-43124-8)	Yes	1	ND		100.00	Q, CA, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546373.HPL	FSS-064-081821 (160-43124-9)	Yes	1	ND		100.00	Q, CA, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546374.HPL	FSS-065-081821 (160-43124-11)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546375.HPL	FSS-066-081821 (160-43124-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546376.HPL	FSS-066-081821 (160-43124-13)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546377.HPL	FSS-067-081821 (160-43124-14)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546378.HPL	FSS-068-081821 (160-43124-15)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546379.HPL	FSS-069-081821 (160-43124-16)	Yes	1	ND		100.00	Q, CA, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546380.HPL	FSS-070-081821 (160-43124-17)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546381.HPL	FSS-071-081821 (160-43124-18)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546382.HPL	FSS-072-081821 (160-43124-19)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-09/30/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546383.HPL	FSS-073-081821 (160-43124-20)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546384.HPL	FSS-074-081821 (160-43124-21)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546385.HPL	FSS-075-081821 (160-43124-22)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546386.HPL	FSS-076-081821 (160-43124-23)	Yes	1	ND		100.00	Q, CA, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546387.HPL	FSS-077-081821 (160-43124-24)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546388.HPL	FSS-078-081821 (160-43124-25)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546389.HPL	FSS-079-081821 (160-43124-26)	Yes	1	ND		100.00	Q, CA, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546390.HPL	FSS-279-081821 (160-43124-27)	Yes	1	ND		100.00	Q, CA, AM, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546391.HPL	FSS-080-081821 (160-43124-28)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546392.HPL	FSS-280-081821 (160-43124-29)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546393.HPL	FSS-081-081821 (160-43124-30)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546394.HPL	FSS-281-081821 (160-43124-31)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/01/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43124-1 RJ Lee Group Job No: AOH1063223-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.5
Samples FSS-082 through -093

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43154-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/8/2021 6:07:35 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-43154-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43154-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/20/2021 8:41 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 23.8º C.

Receipt Exceptions

Job ID: 160-43154-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples are logged in for MS and/or MSD analysis using the client sample ID as a parent sample ID, and the same ID with MS or MSD on the end is used for the spikes. This allows the system to calculate the QC statistics for sample duplicates. This was unknown to the client at the time the revised COC was delivered. The result was that three samples for three project points (one for each point) were analyzed in duplicate. One of each sample had an MS/MSD analyzed with it. The duplicate sample only results were reported in job 160-43145-2. Refer to Table 1 (Job 160-43154-1 - Updated Sample IDs) after the case narrative for a summary of this information.

ASBESTOS

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis. The report supplied by RJ LEE was annotated by the lab to account for the sample ID updates listed in the receipt exceptions section of the narrative.

METALS (ICP/MS)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/15/2021 and analyzed on 09/16/2021.

Preparation Batch 280-549130, Analytical Batch 280-549986:
The matrix spike (MS) recovery for lead was outside the lower control limit. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recoveries were within acceptance limits: Lead exceeded the RPD limit for the MS/MSD due to the MS low recovery: FSS-090-081921MS (160-43154-9) and FSS-090-081921MSD (160-43154-9).

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

MERCURY (CVAA)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/15/2021.

Preparation Batch 280-549365, Analytical Batch 280-550080:
The matrix spike and matrix spike duplicate (MS/MSD) recoveries were outside the lower control limit for Hg. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recoveries were within acceptance limits: FSS-088-081921MS/MSD (160-43154-7).

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

PERCENT SOLIDS

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/01/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/23/2021, prepared on 09/20/2021 and analyzed on 10/04/2021.

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

TRITIUM

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921

Job ID: 160-43154-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/10/2021 and analyzed on 09/16/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/23/2021, prepared on 09/05/2021 and analyzed on 09/14/2021 and 09/15/2021.

Preparation Batch 160-527652:
The samples were inadvertently counted on a detector that did not have the daily background check performed. The daily background passed the day prior (10/3/2021) and the day after (10/5/2021) the sample counted. The sample activity was below the MDC and RL. The lab does not believe this excursion adversely affects the data: FSS-084-081921 (160-43154-3) and FSS-087-081921 (160-43154-9).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), , , , FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/23/2021, prepared on 09/05/2021 and analyzed on 09/14/2021 and 09/15/2021.

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

CARBON-14 BY LSC

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/21/2021 and analyzed on 09/22/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/23/2021, prepared on 08/26/2021 and analyzed on 09/18/2021, 09/20/2021 and 09/22/2021.

Preparation Batch 160-524254:
The replicate precision for Pb-212 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for these statistical exceedances: (160-43154-D-9-F DU).

For samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), (LCS 160-524254/2-A), (MB 160-524254/1-A), and (160-43154-D-9-F DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

```
Inferred    Reported
```

Job ID: 160-43154-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

From Nuclide	to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-524257:
For samples FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11), FSS-093-081921 (160-43154-12), (LCS 160-524257/2-A), (MB 160-524257/1-A), (160-43157-D-24-C), and (160-43157-D-24-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Job ID: 160-43154-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/23/2021, prepared on 09/13/2021 and 09/16/2021 and analyzed on 09/22/2021.

Preparation Batch 160-526820:
The Method Blank (MB) for the following samples activity above the MDC. The samples and blank did not have activity above the requested limit; therefore, the results were reported: FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), (LCS 160-526820/2-A), (MB 160-526820/1-A), (160-43124-D-26-H), and (160-43124-D-26-M DU).

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

PLUTONIUM 241
Samples FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11) and FSS-093-081921 (160-43154-12) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/05/2021 and analyzed on 09/24/2021 and 09/25/2021.

Preparation Batch 160-525621:
The Laboratory Control Sample (LCS) recovered above the upper control limit at 129% (125%). The samples had activity less than the MDC and requested limit; therefore the results were reported: FSS-082-081921 (160-43154-1), FSS-083-081921 (160-43154-2), FSS-084-081921 (160-43154-3), FSS-085-081921 (160-43154-7), FSS-086-081921 (160-43154-8), FSS-087-081921 (160-43154-9), FSS-091-081921 (160-43154-10), FSS-092-081921 (160-43154-11), FSS-093-081921 (160-43154-12), (LCS 160-525621/2-A), (MB 160-525621/1-A), (160-43124-D-27-G), and (160-43124-D-27-H DU).

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

Table 1. Job 160-43154-1 - Updated Sample IDs				
Project Sample Point	Lab sample ID	Initial Client Sample ID	Revised Client Sample ID	Results Reported in Job #
SU 7C - SS00090 0"-6"	160-43154-4	FSS-085-091921	FSS-088-091921	160-43154-2
SU 7C - SS00090 0"-6"	160-43154-7	FSS-088-091921	FSS-085-091921	160-43154-1
SU 7C - SS00090 0"-6"	160-43154-7MS	FSS-088-091921MS	FSS-085-091921MS	160-43154-1
SU 7C - SS00090 0"-6"	160-43154-7MSD	FSS-088-091921MSD	FSS-085-091921MSD	160-43154-1
SU 7C - SS00090 6"-12"	160-43154-5	FSS-086-091921	FSS-089-091921	160-43154-2
SU 7C - SS00090 6"-12"	160-43154-8	FSS-089-091921	FSS-086-091921	160-43134-1
SU 7C - SS00090 6"-12"	160-43154-8MS	FSS-089-091921MS	FSS-086-091921MS	160-43134-1
SU 7C - SS00090 6"-12"	160-43154-8MSD	FSS-089-091921MSD	FSS-086-091921MSD	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-6	FSS-087-091921	FSS-090-091921	160-43154-2
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921	FSS-087-091921	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921MS	FSS-087-091921MS	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921MSD	FSS-087-091921MSD	160-43134-1

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

160-43154 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing TestAmerica

☐ W ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-19-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	3 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-082-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 0"-6"
FSS-083-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 6"-12"
FSS-084-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 18"-24"
FSS-085-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 0"-6"
FSS-086-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 6"-12"
FSS-087-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 18"-24"
FSS-088-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 0"-6" MS/MSD
FSS-089-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 6"-12" MS/MSD
FSS-090-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 18"-24" MS/~~MD~~ MSD
FSS-091-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 0"-6"
FSS-092-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 6"-12"
FSS-093-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-19-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Sierra Worthington	Company: GTAS12	Date/Time: 8/20/21 0841
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☑Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-19-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___3___ of ___3___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC							Sample Specific Notes:
FSS-082-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 0"-6"
FSS-083-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 6"-12"
FSS-084-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 18"-24"
FSS-085-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 0"-6"
FSS-086-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 6"-12"
FSS-087-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 18"-24"
~~FSS-088-081921~~ FSS-085-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 0"-6" MS/MSD
~~FSS-089-081921~~ FSS-086-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 6"-12" MS/MSD
~~FSS-090-081921~~ FSS-087-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 18"-24" MS/MD
FSS-091-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 0"-6"
FSS-092-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 6"-12"
FSS-093-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155
Note: FSS-085 through -087 have corresponding MS/MSD requests and are shown in duplicate. Original (strike-out) IDs for -088 through -090 are no longer valid sample IDs.

Revised COC Rcd TA -

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-19-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217993.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA, DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 4955 Yarrow Street.	Due Date Requested: 10/3/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code								
FSS-082-081921 (160-43154-1)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-083-081921 (160-43154-2)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-084-081921 (160-43154-3)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-085-081921 (160-43154-4)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-086-081921 (160-43154-5)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-087-081921 (160-43154-6)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-088-081921 (160-43154-7)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-088-081921 (160-43154-7MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-088-081921 (160-43154-7MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment
Relinquished by: Michael Kemerling	Date/Time: 8/23/2021 17:00	Company: ETA SL	Received by:	Date/Time: 08/23/2021 1420	Company: ETA SL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 18.9 IR11 T1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217993.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/3/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD6/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD6/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-089-081921 (160-43154-8)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-089-081921 (160-43154-8MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-089-081921 (160-43154-8MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	
FSS-090-081921 (160-43154-9)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-090-081921 (160-43154-9MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-090-081921 (160-43154-9MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	
FSS-091-081921 (160-43154-10)	8/19/21	14:45 Eastern		Solid			X	X	X	1	
FSS-092-081921 (160-43154-11)	8/19/21	14:45 Eastern		Solid			X	X	X	1	
FSS-093-081921 (160-43154-12)	8/19/21	14:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification		**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**	
Unconfirmed		☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:	
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Michael Kerlin Hugh	Date/Time: 8/23/2021 17:00	Company: ETA SL	Received by:	Date/Time: 08/24/2021 1420	Company: EUROFINS
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Received by:	Date/Time:	Company:
			Cooler Temperature(s) °C and Other Remarks:		

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063241-O

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-082-081921 (160-43154-1)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-083-081921 (160-43154-2)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-084-081921 (160-43154-3)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-085-081921 (160-43154-4)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-086-081921 (160-43154-5)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-087-081921 (160-43154-6)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-088-081921 (160-43154-7)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-7MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-7MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/23/2021 17:00	ETA SD	[signature]	08252021 1:00pm	RJLeeGroup
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH1063241-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-088-081921 (160-43154-8)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-8MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-8MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-091-081921 (160-43154-10)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-092-081921 (160-43154-11)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-093-081921 (160-43154-12)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Cunningham	8/23/2021 17:00	ETA SV	Linda Traugu	08/25/2021 1:00PM	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43154-1

Login Number: 43154
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43154-1

Login Number: 43154
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/25/21 08:10 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43154-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43154-1	FSS-082-081921	Solid	08/19/21 13:00	08/20/21 08:41
160-43154-2	FSS-083-081921	Solid	08/19/21 13:00	08/20/21 08:41
160-43154-3	FSS-084-081921	Solid	08/19/21 13:00	08/20/21 08:41
160-43154-7	FSS-085-081921	Solid	08/19/21 13:15	08/20/21 08:41
160-43154-8	FSS-086-081921	Solid	08/19/21 13:15	08/20/21 08:41
160-43154-9	FSS-087-081921	Solid	08/19/21 13:15	08/20/21 08:41
160-43154-10	FSS-091-081921	Solid	08/19/21 14:45	08/20/21 08:41
160-43154-11	FSS-092-081921	Solid	08/19/21 14:45	08/20/21 08:41
160-43154-12	FSS-093-081921	Solid	08/19/21 14:45	08/20/21 08:41

Client Sample ID: FSS-082-081921

Date Collected: 08/19/21 13:00
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0898	U	0.157	0.157	3.00	0.304	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*
Y Carrier	*99.8*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.239	U	0.271	0.272	1.00	0.526	pCi/g	09/10/21 15:03	09/16/21 17:48	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0316	U	0.0347	0.0348	1.00	0.111	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	-0.0122	U	0.0238	0.0239	1.00	0.0829	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.0*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.157**		0.0783	0.0793	1.00	0.0596	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0240	U	0.0332	0.0333	1.00	0.0360	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.190**		0.0844	0.0859	1.00	0.0465	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*69.5*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0400	U	0.572	0.572	5.00	1.03	pCi/g	09/21/21 10:06	09/22/21 17:03	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.528**		0.151	0.160		0.0828	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Bismuth-212	0.368	U	0.690	0.691		1.20	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Bismuth-214	**0.334**		0.108	0.113		0.101	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Lead-212	**0.376**		0.0797	0.0928		0.0862	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Lead-214	**0.325**		0.0894	0.0953		0.104	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Potassium-40	**3.54**		0.845	0.916		0.678	pCi/g	08/26/21 12:50	09/20/21 12:13	1

Client Sample ID: FSS-082-081921

Lab Sample ID: 160-43154-1
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.334**		0.108	0.113	1.00	0.101	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Thorium-232	**0.528**		0.151	0.160		0.0828	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Americium-241	-0.00465	U	0.163	0.163		0.283	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Cesium-137	**0.100**		0.0389	0.0402		0.0314	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Cobalt-60	-0.00727	U	0.0645	0.0645		0.0783	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Europium-152	0.0634	U	0.0375	0.0380		0.181	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Europium-154	0.0651	U	0.0984	0.0987		0.103	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Europium-155	0.0572	U	0.126	0.126		0.355	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Sodium-22	-0.00703	U	0.0397	0.0397		0.0756	pCi/g	08/26/21 12:50	09/20/21 12:13	1
Zinc-65	-0.0139	U	0.146	0.146		0.244	pCi/g	08/26/21 12:50	09/20/21 12:13	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.624	U	0.804	0.807	5.00	1.35	pCi/g	09/13/21 15:48	09/22/21 04:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/13/21 15:48*	*09/22/21 04:19*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.15	U	1.53	1.53	5.00	2.66	pCi/g	09/05/21 20:20	09/24/21 23:52	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.0*		*30 - 110*	*09/05/21 20:20*	*09/24/21 23:52*	*1*

Client Sample ID: FSS-082-081921

Lab Sample ID: 160-43154-1
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 98.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.7**		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/16/21 02:07	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**13**	**J**	18	5.7	ug/Kg	☼	09/15/21 15:00	09/15/21 16:41	1

Client Sample ID: FSS-083-081921

Lab Sample ID: 160-43154-2
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0228	U	0.154	0.154	3.00	0.279	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Client Sample ID: FSS-083-081921

Date Collected: 08/19/21 13:00
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-2

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	81.3		40 - 110	09/20/21 10:28	10/04/21 17:18	1
Y Carrier	101		40 - 110	09/20/21 10:28	10/04/21 17:18	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.367	U	0.258	0.260	1.00	0.523	pCi/g	09/10/21 15:03	09/16/21 18:10	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00460	U	0.0278	0.0278	1.00	0.0691	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.0253	U	0.0316	0.0317	1.00	0.0446	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	93.1		30 - 110	09/05/21 17:56	09/14/21 17:39	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.167**		0.0799	0.0811	1.00	0.0621	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.00867	U	0.0234	0.0234	1.00	0.0560	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.267**		0.0980	0.100	1.00	0.0449	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	78.5		30 - 110	09/05/21 20:32	09/14/21 17:54	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.304	U	0.700	0.701	5.00	1.21	pCi/g	09/21/21 10:06	09/22/21 18:11	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.145	U	0.159	0.160		0.263	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Bismuth-212	0.000	U	0.400	0.400		1.46	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Bismuth-214	0.0526	U	0.183	0.183		0.345	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Lead-212	**0.381**		0.0810	0.0943		0.0873	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Lead-214	**0.334**		0.0966	0.102		0.0871	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Potassium-40	**3.58**		0.860	0.932		0.693	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Radium-226	0.0526	U	0.183	0.183	1.00	0.345	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Thorium-232	0.145	U	0.159	0.160		0.263	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Americium-241	-0.0559	U	0.168	0.168		0.289	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Cesium-137	**0.144**		0.0415	0.0440		0.0227	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Cobalt-60	-0.0357	U	0.0833	0.0834		0.0953	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Europium-152	0.0855	U	0.138	0.138		0.153	pCi/g	08/26/21 12:50	09/18/21 15:25	1

Client Sample ID: FSS-083-081921

Lab Sample ID: 160-43154-2
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0290	U	0.0591	0.0592		0.102	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Europium-155	0.0268	U	0.0846	0.0846		0.356	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Sodium-22	-0.00144	U	0.0281	0.0281		0.0581	pCi/g	08/26/21 12:50	09/18/21 15:25	1
Zinc-65	0.00587	U	0.136	0.136		0.248	pCi/g	08/26/21 12:50	09/18/21 15:25	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.438	U	0.843	0.844	5.00	1.45	pCi/g	09/13/21 15:48	09/22/21 05:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/13/21 15:48*	*09/22/21 05:26*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.532	U	1.40	1.40	5.00	2.49	pCi/g	09/05/21 20:20	09/25/21 00:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.1*		*30 - 110*	*09/05/21 20:20*	*09/25/21 00:58*	*1*

Client Sample ID: FSS-083-081921

Lab Sample ID: 160-43154-2
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 97.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	4.4		0.29	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 02:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	J	20	6.4	ug/Kg	☼	09/15/21 15:00	09/15/21 16:44	1

Client Sample ID: FSS-084-081921

Lab Sample ID: 160-43154-3
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0957	U	0.169	0.169	3.00	0.324	pCi/g	09/20/21 10:28	10/04/21 17:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:27*	*1*
Y Carrier	*99.8*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:27*	*1*

Client Sample ID: FSS-084-081921

Date Collected: 08/19/21 13:00
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-3

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.295	U	0.252	0.254	1.00	0.501	pCi/g	09/10/21 15:03	09/16/21 18:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00443	U	0.0184	0.0184	1.00	0.0496	pCi/g	09/05/21 17:56	09/15/21 22:21	1
Plutonium-239/240	-0.0111	U	0.00971	0.00975	1.00	0.0630	pCi/g	09/05/21 17:56	09/15/21 22:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*76.2*		*30 - 110*	*09/05/21 17:56*	*09/15/21 22:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.157**		0.0752	0.0763	1.00	0.0678	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.00257	U	0.00504	0.00505	1.00	0.0498	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.122**		0.0628	0.0636	1.00	0.0399	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.8*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.977	U	0.838	0.844	5.00	1.38	pCi/g	09/21/21 10:06	09/22/21 18:34	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.232**		0.0946	0.0974		0.108	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Bismuth-212	-0.134	U	0.462	0.463		0.824	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Bismuth-214	**0.186**		0.0785	0.0807		0.0884	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Lead-212	**0.292**		0.0693	0.0786		0.0672	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Lead-214	**0.174**		0.0567	0.0594		0.0934	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Potassium-40	**3.89**		0.746	0.841		0.521	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Radium-226	**0.186**		0.0785	0.0807	1.00	0.0884	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Thorium-232	**0.232**		0.0946	0.0974		0.108	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Americium-241	0.0459	U	0.105	0.105		0.179	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Cesium-137	**0.0569**		0.0219	0.0226		0.0161	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Cobalt-60	0.00341	U	0.00655	0.00656		0.0591	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-152	0.0501	U	0.0690	0.0692		0.123	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-154	0.0260	U	0.0479	0.0480		0.0820	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-155	-0.0533	U	0.123	0.123		0.214	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Sodium-22	-0.0197	U	0.0328	0.0328		0.0571	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Zinc-65	-0.0615	U	0.125	0.125		0.216	pCi/g	08/26/21 12:50	09/18/21 15:59	1

Client Sample ID: FSS-084-081921

Lab Sample ID: 160-43154-3
Matrix: Solid
Date Collected: 08/19/21 13:00
Date Received: 08/20/21 08:41

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.742	U	0.777	0.781	5.00	1.30	pCi/g	09/13/21 15:48	09/22/21 06:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*09/13/21 15:48*	*09/22/21 06:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.409	U	1.53	1.53	5.00	2.66	pCi/g	09/05/21 20:20	09/25/21 02:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*76.2*		*30 - 110*	*09/05/21 20:20*	*09/25/21 02:05*	*1*

Client Sample ID: FSS-084-081921

Lab Sample ID: 160-43154-3
Matrix: Solid
Date Collected: 08/19/21 13:00
Date Received: 08/20/21 08:41
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.0		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/16/21 02:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	J	19	6.2	ug/Kg	☼	09/15/21 15:00	09/15/21 16:46	1

Client Sample ID: FSS-085-081921

Lab Sample ID: 160-43154-7
Matrix: Solid
Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0182	U	0.183	0.183	3.00	0.330	pCi/g	09/20/21 10:28	10/04/21 17:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.5*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:24*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:24*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.239	U	0.260	0.261	1.00	0.507	pCi/g	09/10/21 15:03	09/16/21 20:03	1

Client Sample ID: FSS-085-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-7

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00274	U	0.00537	0.00538	1.00	0.0531	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	-0.00275	U	0.00538	0.00539	1.00	0.0531	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*64.5*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.257**		0.100	0.102	1.00	0.0607	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.000	U	0.00598	0.00598	1.00	0.0366	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.164**		0.0793	0.0804	1.00	0.0474	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*70.1*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.162	U	0.515	0.515	5.00	0.899	pCi/g	09/21/21 10:06	09/22/21 20:04	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.383**		0.114	0.120		0.143	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Bismuth-212	0.181	U	0.430	0.431		0.758	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Bismuth-214	**0.208**		0.0721	0.0752		0.0773	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Lead-212	**0.278**		0.0586	0.0684		0.0640	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Lead-214	**0.243**		0.0700	0.0743		0.0732	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Potassium-40	**2.40**		0.609	0.654		0.521	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Radium-226	**0.208**		0.0721	0.0752	1.00	0.0773	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Thorium-232	**0.383**		0.114	0.120		0.143	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Americium-241	0.00673	U	0.100	0.100		0.175	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Cesium-137	**0.0657**		0.0235	0.0244		0.0161	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Cobalt-60	0.0107	U	0.0370	0.0370		0.0444	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Europium-152	0.0670	U	0.0929	0.0932		0.102	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Europium-154	0.0294	U	0.0314	0.0316		0.0846	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Europium-155	-0.0657	U	0.117	0.117		0.361	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Sodium-22	0.0103	U	0.0233	0.0233		0.0428	pCi/g	08/26/21 12:50	09/18/21 16:31	1
Zinc-65	0.000	U	0.0572	0.0572		0.175	pCi/g	08/26/21 12:50	09/18/21 16:31	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.596	U	0.884	0.886	5.00	1.50	pCi/g	09/13/21 15:48	09/22/21 10:57	1

Client Sample ID: FSS-085-081921

Lab Sample ID: 160-43154-7
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	92.7		40 - 110	09/13/21 15:48	09/22/21 10:57	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.08	U	1.38	1.38	5.00	2.33	pCi/g	09/05/21 20:20	09/25/21 06:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	64.5		30 - 110	09/05/21 20:20	09/25/21 06:30	1

Client Sample ID: FSS-085-081921

Lab Sample ID: 160-43154-7
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 97.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/16/21 02:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	6.4	J	19	6.3	ug/Kg	☼	09/15/21 15:00	09/15/21 16:57	1

Client Sample ID: FSS-086-081921

Lab Sample ID: 160-43154-8
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.212	U	0.200	0.200	3.00	0.330	pCi/g	09/20/21 10:28	10/04/21 17:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.2		40 - 110	09/20/21 10:28	10/04/21 17:25	1
Y Carrier	98.7		40 - 110	09/20/21 10:28	10/04/21 17:25	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.233	U	0.250	0.251	1.00	0.483	pCi/g	09/10/21 15:03	09/16/21 20:26	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0109	U	0.0322	0.0322	1.00	0.0731	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	0.00821	U	0.0221	0.0221	1.00	0.0530	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	62.9		30 - 110	09/05/21 18:15	09/14/21 17:39	1

Client Sample ID: FSS-086-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-8

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.175**		0.0990	0.100	1.00	0.120	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.00326	U	0.00638	0.00639	1.00	0.0630	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.227**		0.0988	0.101	1.00	0.0743	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*64.5*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.423	U	0.551	0.553	5.00	0.934	pCi/g	09/21/21 10:06	09/22/21 20:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.505**		0.198	0.205		0.166	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Bismuth-212	-0.384	U	0.826	0.827		1.44	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Bismuth-214	**0.300**		0.115	0.119		0.134	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Lead-212	**0.313**		0.0792	0.0855		0.0907	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Lead-214	**0.243**		0.121	0.123		0.136	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Potassium-40	**4.11**		0.880	0.969		0.361	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Radium-226	**0.300**		0.115	0.119	1.00	0.134	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Thorium-232	**0.505**		0.198	0.205		0.166	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Americium-241	0.0616	U	0.148	0.149		0.255	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Cesium-137	0.0250	U	0.0476	0.0476		0.0832	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Cobalt-60	-0.0389	U	0.0960	0.0960		0.107	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Europium-152	0.0207	U	0.0269	0.0270		0.184	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Europium-154	0.0829	U	0.106	0.106		0.123	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Europium-155	-0.0000000179	U	0.298	0.298		0.514	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Sodium-22	-0.00157	U	0.0442	0.0442		0.0864	pCi/g	08/26/21 12:50	09/18/21 16:32	1
Zinc-65	-0.00724	U	0.119	0.119		0.222	pCi/g	08/26/21 12:50	09/18/21 16:32	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.677	U	0.894	0.897	5.00	1.50	pCi/g	09/13/21 15:48	09/22/21 12:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.5*		*40 - 110*	*09/13/21 15:48*	*09/22/21 12:03*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.28	U	1.29	1.31	5.00	2.31	pCi/g	09/05/21 20:20	09/25/21 07:36	1

Client Sample ID: FSS-086-081921

Lab Sample ID: 160-43154-8
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	62.9		30 - 110	09/05/21 20:20	09/25/21 07:36	1

Client Sample ID: FSS-086-081921

Lab Sample ID: 160-43154-8
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 85.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.0**		0.33	0.020	mg/Kg	☼	09/15/21 07:52	09/16/21 02:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	17	U	22	7.2	ug/Kg	☼	09/15/21 15:00	09/15/21 17:15	1

Client Sample ID: FSS-087-081921

Lab Sample ID: 160-43154-9
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0170	U	0.154	0.154	3.00	0.287	pCi/g	09/20/21 10:28	10/04/21 17:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.9		40 - 110	09/20/21 10:28	10/04/21 17:25	1
Y Carrier	98.7		40 - 110	09/20/21 10:28	10/04/21 17:25	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.190	U	0.261	0.262	1.00	0.502	pCi/g	09/10/21 15:03	09/16/21 20:49	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00411	U	0.0171	0.0171	1.00	0.0460	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	-0.00205	U	0.0185	0.0185	1.00	0.0585	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	76.8		30 - 110	09/05/21 18:15	09/14/21 17:39	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.124**		0.0729	0.0737	1.00	0.0846	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.0133	U	0.0261	0.0261	1.00	0.0908	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.107**		0.0607	0.0613	1.00	0.0479	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Client Sample ID: FSS-087-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-9

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	*75.4*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.405	U	0.802	0.803	5.00	1.38	pCi/g	09/21/21 10:06	09/22/21 20:50	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.488**		0.218	0.223		0.209	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Bismuth-212	0.000	U	0.192	0.192		1.07	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Bismuth-214	**0.504**		0.133	0.143		0.103	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Lead-212	**0.432**		0.0849	0.101		0.0828	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Lead-214	**0.401**		0.0944	0.103		0.0892	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Potassium-40	**2.93**		1.08	1.12		1.08	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Radium-226	**0.504**		0.133	0.143	1.00	0.103	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Thorium-232	**0.488**		0.218	0.223		0.209	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Americium-241	-0.0693	U	0.191	0.191		0.327	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Cesium-137	0.0224	U	0.0463	0.0464		0.0813	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Cobalt-60	0.0300	U	0.0222	0.0224		0.0352	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-152	0.116	U	0.167	0.168		0.147	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-154	0.0678	U	0.119	0.119		0.120	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Europium-155	0.0574	U	0.132	0.132		0.357	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Sodium-22	-0.0169	U	0.0453	0.0453		0.0828	pCi/g	08/26/21 12:50	09/18/21 15:59	1
Zinc-65	-0.00458	U	0.0910	0.0910		0.234	pCi/g	08/26/21 12:50	09/18/21 15:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.919	U	0.925	0.929	5.00	1.54	pCi/g	09/13/21 15:48	09/22/21 13:09	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	*90.2*		*40 - 110*	*09/13/21 15:48*	*09/22/21 13:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.34	U	1.01	1.02	5.00	1.74	pCi/g	09/05/21 20:20	09/25/21 08:42	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	*76.8*		*30 - 110*	*09/05/21 20:20*	*09/25/21 08:42*	*1*

Client Sample ID: FSS-087-081921

Lab Sample ID: 160-43154-9
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 97.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.2**	**J1**	0.29	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 03:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	6.0	ug/Kg	☼	09/15/21 15:00	09/15/21 17:22	1

Client Sample ID: FSS-091-081921

Lab Sample ID: 160-43154-10
Date Collected: 08/19/21 14:45
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.193	U	0.167	0.168	3.00	0.273	pCi/g	09/20/21 10:28	10/04/21 17:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:25*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:25*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.185	U	0.260	0.261	1.00	0.498	pCi/g	09/10/21 15:03	09/16/21 21:11	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0183	U	0.0305	0.0305	1.00	0.107	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	0.0275	U	0.0427	0.0428	1.00	0.0755	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*55.7*		*30 - 110*	*09/05/21 18:15*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.119**		0.0741	0.0747	1.00	0.0776	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0225	U	0.0362	0.0362	1.00	0.0622	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.131**		0.0765	0.0772	1.00	0.0733	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*67.3*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.271	U	0.740	0.740	5.00	1.29	pCi/g	09/21/21 10:06	09/22/21 21:12	1

Client Sample ID: FSS-091-081921

Lab Sample ID: 160-43154-10

Date Collected: 08/19/21 14:45

Matrix: Solid

Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.423**		0.131	0.138		0.149	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Bismuth-212	-0.505	U	0.873	0.874		1.50	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Bismuth-214	**0.399**		0.118	0.125		0.108	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Lead-212	**0.395**		0.0864	0.0999		0.0986	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Lead-214	**0.388**		0.106	0.113		0.0884	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Potassium-40	**3.37**		1.07	1.13		1.03	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Radium-226	**0.399**		0.118	0.125	1.00	0.108	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Thorium-232	**0.423**		0.131	0.138		0.149	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Americium-241	-0.0637	U	0.175	0.175		0.300	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Cesium-137	**0.187**		0.0562	0.0594		0.0444	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Cobalt-60	0.0166	U	0.0496	0.0496		0.0610	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Europium-152	0.0901	U	0.176	0.177		0.172	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Europium-154	0.0517	U	0.0655	0.0657		0.133	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Europium-155	0.0317	U	0.0869	0.0869		0.241	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Sodium-22	0.00729	U	0.0301	0.0301		0.0590	pCi/g	08/26/21 13:50	09/22/21 07:28	1
Zinc-65	-0.0674	U	0.0863	0.0865		0.256	pCi/g	08/26/21 13:50	09/22/21 07:28	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.184	U	0.838	0.839	5.00	1.50	pCi/g	09/16/21 12:04	09/22/21 19:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.5*		*40 - 110*	*09/16/21 12:04*	*09/22/21 19:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.60	U	1.50	1.51	5.00	2.55	pCi/g	09/05/21 20:20	09/25/21 09:48	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*55.7*		*30 - 110*	*09/05/21 20:20*	*09/25/21 09:48*	*1*

Client Sample ID: FSS-091-081921

Lab Sample ID: 160-43154-10

Date Collected: 08/19/21 14:45

Matrix: Solid

Date Received: 08/20/21 08:41

Percent Solids: 86.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**11**		0.32	0.020	mg/Kg	☼	09/15/21 07:52	09/16/21 03:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**6.7**	**J**	21	6.7	ug/Kg	☼	09/15/21 15:00	09/15/21 17:35	1

Client Sample ID: FSS-092-081921

Date Collected: 08/19/21 14:45
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-11

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.148	U	0.179	0.180	3.00	0.349	pCi/g	09/20/21 10:28	10/04/21 17:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.0*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:25*	*1*
Y Carrier	*96.8*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:25*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.322	U	0.247	0.249	1.00	0.494	pCi/g	09/10/21 15:03	09/16/21 21:34	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0228	U	0.0169	0.0170	1.00	0.102	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	0.00976	U	0.0263	0.0263	1.00	0.0630	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.3*		*30 - 110*	*09/05/21 18:15*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.237**		0.109	0.110	1.00	0.0853	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0261	U	0.0420	0.0421	1.00	0.0722	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.138**		0.0858	0.0866	1.00	0.0898	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*60.1*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0940	U	0.666	0.666	5.00	1.20	pCi/g	09/21/21 10:06	09/22/21 21:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.323**		0.129	0.133		0.169	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Bismuth-212	0.000	U	0.313	0.313		0.898	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Bismuth-214	**0.286**		0.0874	0.0921		0.0889	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Lead-212	**0.405**		0.0670	0.0844		0.0496	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Lead-214	**0.202**		0.106	0.108		0.163	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Potassium-40	**2.79**		1.05	1.09		1.02	pCi/g	08/26/21 13:50	09/22/21 15:00	1

Client Sample ID: FSS-092-081921

Lab Sample ID: 160-43154-11
Date Collected: 08/19/21 14:45
Matrix: Solid
Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.286**		0.0874	0.0921	1.00	0.0889	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Thorium-232	**0.323**		0.129	0.133		0.169	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Americium-241	-0.0624	U	0.0488	0.0492		0.164	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Cesium-137	**0.256**		0.0556	0.0614		0.0316	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Cobalt-60	0.0130	U	0.0247	0.0248		0.0524	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Europium-152	0.0446	U	0.0685	0.0686		0.143	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Europium-154	0.0486	U	0.0705	0.0707		0.0891	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Europium-155	0.0250	U	0.0885	0.0885		0.225	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Sodium-22	-0.0391	U	0.0538	0.0539		0.0913	pCi/g	08/26/21 13:50	09/22/21 15:00	1
Zinc-65	0.000499	U	0.113	0.113		0.207	pCi/g	08/26/21 13:50	09/22/21 15:00	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.225	U	0.806	0.806	5.00	1.40	pCi/g	09/16/21 12:04	09/22/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*93.6*		*40 - 110*	*09/16/21 12:04*	*09/22/21 20:33*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.933	U	1.67	1.67	5.00	2.79	pCi/g	09/05/21 20:20	09/25/21 10:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.3*		*30 - 110*	*09/05/21 20:20*	*09/25/21 10:55*	*1*

Client Sample ID: FSS-092-081921

Lab Sample ID: 160-43154-11
Date Collected: 08/19/21 14:45
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 96.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.1**		0.29	0.017	mg/Kg	☼	09/15/21 07:52	09/16/21 03:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**30**		20	6.5	ug/Kg	☼	09/15/21 15:00	09/15/21 17:38	1

Client Sample ID: FSS-093-081921

Lab Sample ID: 160-43154-12
Date Collected: 08/19/21 14:45
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.567**		0.238	0.242	3.00	0.346	pCi/g	09/20/21 10:28	10/04/21 17:26	1

Client Sample ID: FSS-093-081921

Date Collected: 08/19/21 14:45
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-12

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	70.7		40 - 110	09/20/21 10:28	10/04/21 17:26	1
Y Carrier	98.3		40 - 110	09/20/21 10:28	10/04/21 17:26	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.251	U	0.256	0.257	1.00	0.499	pCi/g	09/10/21 15:03	09/16/21 21:57	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00984	U	0.0289	0.0289	1.00	0.0657	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	0.00738	U	0.0199	0.0199	1.00	0.0476	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	70.6		30 - 110	09/05/21 18:15	09/14/21 17:39	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.0996**		0.0736	0.0741	1.00	0.0984	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.000	U	0.00593	0.00593	1.00	0.0363	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.267**		0.101	0.103	1.00	0.0543	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	67.0		30 - 110	09/05/21 20:32	09/14/21 17:54	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.243	U	0.808	0.808	5.00	1.42	pCi/g	09/21/21 10:06	09/22/21 21:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.297**		0.206	0.208		0.237	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Bismuth-212	-0.325	U	0.797	0.797		1.40	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Bismuth-214	**0.447**		0.145	0.151		0.157	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Lead-212	**0.379**		0.0896	0.0977		0.101	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Lead-214	**0.244**		0.114	0.116		0.223	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Potassium-40	**4.37**		1.12	1.20		0.744	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Radium-226	**0.447**		0.145	0.151	1.00	0.157	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Thorium-232	**0.297**		0.206	0.208		0.237	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Americium-241	0.0585	U	0.164	0.164		0.282	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Cesium-137	**0.152**		0.0648	0.0665		0.0626	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Cobalt-60	0.00174	U	0.0575	0.0575		0.0722	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Europium-152	-0.0164	U	0.0367	0.0368		0.174	pCi/g	08/26/21 13:50	09/22/21 15:01	1

Client Sample ID: FSS-093-081921

Lab Sample ID: 160-43154-12

Date Collected: 08/19/21 14:45

Matrix: Solid

Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0749	U	0.132	0.132		0.130	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Europium-155	0.0804	U	0.311	0.312		0.533	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Sodium-22	0.00169	U	0.0338	0.0338		0.0698	pCi/g	08/26/21 13:50	09/22/21 15:01	1
Zinc-65	0.000	U	0.0177	0.0177		0.231	pCi/g	08/26/21 13:50	09/22/21 15:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.277	U	0.886	0.887	5.00	1.57	pCi/g	09/16/21 12:04	09/22/21 21:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.9*		*40 - 110*	*09/16/21 12:04*	*09/22/21 21:39*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.49	U	1.19	1.20	5.00	2.05	pCi/g	09/05/21 20:20	09/25/21 12:01	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.6*		*30 - 110*	*09/05/21 20:20*	*09/25/21 12:01*	*1*

Client Sample ID: FSS-093-081921

Lab Sample ID: 160-43154-12

Date Collected: 08/19/21 14:45

Matrix: Solid

Date Received: 08/20/21 08:41

Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10		0.30	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 03:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/15/21 15:00	09/15/21 17:40	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549130/1-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549130

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/15/21 07:52	09/16/21 01:56	1

Lab Sample ID: LCS 280-549130/2-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.9		mg/Kg		94	84 - 118

Lab Sample ID: LCSD 280-549130/3-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	20.0	19.0		mg/Kg		95	84 - 118	1	20

Lab Sample ID: 160-43154-7MS
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-085-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	10		18.4	28.5		mg/Kg	☼	100	84 - 118

Lab Sample ID: 160-43154-7MSD
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-085-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	10		19.6	28.9		mg/Kg	☼	96	84 - 118	1	20

Lab Sample ID: 160-43154-8 MS
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-086-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	5.0		21.2	26.7		mg/Kg	☼	102	84 - 118

Lab Sample ID: 160-43154-8 MSD
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-086-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	5.0		21.8	26.9		mg/Kg	☼	101	84 - 118	1	20

Lab Sample ID: 160-43154-9 MS
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-087-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3.2	J1	19.8	14.0	J1	mg/Kg	☼	55	84 - 118

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 160-43154-9 MSD
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: FSS-087-081921
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.2	J1	19.4	22.7	J1	mg/Kg	☼	101	84 - 118	47	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-549365/1-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549365

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/15/21 15:00	09/15/21 20:48	1

Lab Sample ID: LCS 280-549365/2-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	365		ug/Kg		110	80 - 124

Lab Sample ID: LCSD 280-549365/3-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	368		ug/Kg		110	80 - 124	1	20

Lab Sample ID: 160-43154-7MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-085-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	301		359	382	J1	ug/Kg	☼	23	80 - 124

Lab Sample ID: 160-43154-7MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-085-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	301		347	363	J1	ug/Kg	☼	18	80 - 124	5	20

Lab Sample ID: 160-43154-8 MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-086-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	17	U	423	425		ug/Kg	☼	100	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43154-8 MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-086-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	17	U	395	400		ug/Kg	☼	101	80 - 124	6	20

Lab Sample ID: 160-43154-9 MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-087-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	362	368		ug/Kg	☼	102	80 - 124

Lab Sample ID: 160-43154-9 MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-087-081921
Prep Type: Total/NA
Prep Batch: 549365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	356	371		ug/Kg	☼	104	80 - 124	1	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527652/1-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527652

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.01279	U	0.165	0.165	3.00	0.299	pCi/g	09/20/21 10:28	10/04/21 17:17	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.6*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*

Lab Sample ID: LCS 160-527652/2-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527652

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Strontium-90			7.61	7.087		0.743	3.00	0.262	pCi/g	93	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*87.5*		*40 - 110*
Y Carrier	*100*		*40 - 110*

Lab Sample ID: 160-43195-A-30-H DU
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527652

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.153	U		0.09027	U	0.205	3.00	0.358	pCi/g			0.44	3

Method: 905 - Strontium-90 (GFPC) (Continued)

Carrier	DU %Yield	DU Qualifier	Limits
Sr Carrier	75.1		40 - 110
Y Carrier	103		40 - 110

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-526292/1-A
Matrix: Solid
Analysis Batch: 527449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526292

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.09009	U	0.274	0.274	1.00	0.509	pCi/g	09/10/21 15:03	09/16/21 17:03	1

Lab Sample ID: LCS 160-526292/2-A
Matrix: Solid
Analysis Batch: 527449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526292

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.61	7.021		0.860	1.00	0.469	pCi/g	92	79 - 125		

Lab Sample ID: 160-43154-11 MS
Matrix: Solid
Analysis Batch: 527449

Client Sample ID: FSS-092-081921
Prep Type: Total/NA
Prep Batch: 526292

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.322	U	7.50	6.794		0.862	1.00	0.512	pCi/g	91	78 - 122		

Lab Sample ID: 160-43154-1 DU
Matrix: Solid
Analysis Batch: 527589

Client Sample ID: FSS-082-081921
Prep Type: Total/NA
Prep Batch: 526292

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-0.239	U		-0.1281	U	0.263	1.00	0.497	pCi/g			0.57	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: LCS 160-525622/2-A
Matrix: Solid
Analysis Batch: 526997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525622

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.194		0.675	1.00	0.0398	pCi/g	97	76 - 117		
Uranium-238			6.51	5.982		0.657	1.00	0.0459	pCi/g	92	78 - 118		

Tracer	LCS %Yield	LCS Qualifier	Limits
Uranium-232	84.7		30 - 110

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-D-27-J DU
Matrix: Solid
Analysis Batch: 526999

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525622

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.0642	U		0.1762		0.0868	1.00	0.0759	pCi/g			1.72	3
Uranium-235/236	-0.0200	U		0.04505	U	0.0476	1.00	0.0581	pCi/g			2.19	3
Uranium-238	0.224			0.2408		0.0988	1.00	0.0643	pCi/g			0.23	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*72.3*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-525615/1-A
Matrix: Solid
Analysis Batch: 526926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525615

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.001978	U	0.0298	0.0298	1.00	0.0720	pCi/g	09/05/21 17:56	09/14/21 17:40	1
Plutonium-239/240	0.003959	U	0.0165	0.0165	1.00	0.0444	pCi/g	09/05/21 17:56	09/14/21 17:40	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:40*	*1*

Lab Sample ID: LCS 160-525615/2-A
Matrix: Solid
Analysis Batch: 526927

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525615

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.842		0.667	1.00	0.0909	pCi/g	112	80 - 125		
Plutonium-239/240			5.28	5.786		0.661	1.00	0.0585	pCi/g	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*79.6*		*30 - 110*

Lab Sample ID: 160-43124-D-27-F DU
Matrix: Solid
Analysis Batch: 526929

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525615

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0106	U		-0.00229 8	U	0.00451	1.00	0.0445	pCi/g			0.65	3
Plutonium-239/240	-0.00266	U		-0.00460 0	U	0.00639	1.00	0.0515	pCi/g			0.46	3

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-D-27-F DU
Matrix: Solid
Analysis Batch: 526929

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525615

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*86.0*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-527842/1-A
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527842

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.7523	U	0.826	0.830	5.00	1.39	pCi/g	09/21/21 10:06	09/22/21 14:48	1

Lab Sample ID: LCS 160-527842/2-A
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527842

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.72		9.27	5.00	1.38	pCi/g	98	75 - 125		

Lab Sample ID: 160-43154-1 MS
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: FSS-082-081921
Prep Type: Total/NA
Prep Batch: 527842

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.0400	U	81.1	81.27		9.10	5.00	1.33	pCi/g	100	29 - 128		

Lab Sample ID: 160-43154-1 DU
Matrix: Solid
Analysis Batch: 528481

Client Sample ID: FSS-082-081921
Prep Type: Total/NA
Prep Batch: 527842

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0400	U		-0.1802	U	0.766	5.00	1.39	pCi/g			0.29	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: LCS 160-524254/2-A
Matrix: Solid
Analysis Batch: 527650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524254

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	93.85		9.67		1.15	pCi/g	97	87 - 116		
Cesium-137			26.3	25.88		2.71		0.186	pCi/g	99	87 - 120		
Cobalt-60			8.56	8.348		0.870		0.0382	pCi/g	98	87 - 115		

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43154-9 DU
Matrix: Solid
Analysis Batch: 527648

Client Sample ID: FSS-087-081921
Prep Type: Total/NA
Prep Batch: 524254

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.488		0.2065	U	0.168		0.222	pCi/g	1.98	2
Bismuth-212	0.000	U	0.1136	U	0.541		0.972	pCi/g	0.39	2
Bismuth-214	0.504		0.2532		0.104		0.113	pCi/g	2.78	2
Lead-212	0.432		0.04314	U	0.0986		0.169	pCi/g	5.40	2
Lead-214	0.401		0.3225		0.0793		0.0662	pCi/g	1.18	2
Potassium-40	2.93		3.905		0.843		0.274	pCi/g	1.36	2
Radium-226	0.504		0.2532		0.104	1.00	0.113	pCi/g	2.78	2
Thorium-232	0.488		0.2065	U	0.168		0.222	pCi/g	1.98	2
Americium-241	-0.0693	U	0.01979	U	0.107		0.143	pCi/g	0.80	2
Cesium-137	0.0224	U	0.0000	U	0.00492		0.0873	pCi/g	0.94	2
Cobalt-60	0.0300	U	0.01843	U	0.0163		0.0272	pCi/g	0.82	2
Europium-152	0.116	U	0.05854	U	0.0974		0.138	pCi/g	0.58	2
Europium-154	0.0678	U	0.02712	U	0.0584		0.0911	pCi/g	0.60	2
Europium-155	0.0574	U	-0.07754	U	0.241		0.411	pCi/g	0.96	2
Sodium-22	-0.0169	U	0.02136	U	0.0172		0.0262	pCi/g	1.55	2
Zinc-65	-0.00458	U	0.0000	U	0.0124		0.201	pCi/g	0.1	2

Lab Sample ID: MB 160-524257/1-A
Matrix: Solid
Analysis Batch: 528327

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524257

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.01134	U	0.0360	0.0360		0.265	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Bismuth-212	0.1406	U	0.810	0.811		1.47	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Bismuth-214	0.02344	U	0.0352	0.0353		0.324	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Lead-212	0.001236	U	0.0978	0.0978		0.174	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Lead-214	0.006017	U	0.107	0.107		0.196	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Potassium-40	-0.08877	U	0.453	0.453		0.945	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Radium-226	0.02344	U	0.0352	0.0353	1.00	0.324	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Thorium-232	0.01134	U	0.0360	0.0360		0.265	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Americium-241	-0.05574	U	0.140	0.141		0.243	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Cesium-137	0.02007	U	0.0439	0.0440		0.0785	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Cobalt-60	-0.04662	U	0.0944	0.0946		0.109	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-152	0.09335	U	0.0610	0.0617		0.149	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-154	0.01668	U	0.0319	0.0320		0.125	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-155	-0.06081	U	0.170	0.170		0.292	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Sodium-22	0.003918	U	0.0388	0.0388		0.0792	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Zinc-65	-0.005834	U	0.0676	0.0676		0.179	pCi/g	08/26/21 13:50	09/22/21 16:21	1

Lab Sample ID: LCS 160-524257/2-A
Matrix: Solid
Analysis Batch: 528304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524257

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	102.4		10.5		1.17	pCi/g	106	87 - 116
Cesium-137	26.3	26.96		2.82		0.224	pCi/g	103	87 - 120

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-524257/2-A
Matrix: Solid
Analysis Batch: 528304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524257

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Cobalt-60			8.55	8.926		0.927		0.0771	pCi/g	104	87 - 115		

Lab Sample ID: 160-43157-D-24-D DU
Matrix: Solid
Analysis Batch: 528323

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 524257

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.318			0.3911		0.121		0.0641	pCi/g			0.58	2
Bismuth-212	-0.252	U		-0.1919	U	0.643		1.13	pCi/g			0.13	2
Bismuth-214	0.0850	U		0.2262		0.0808		0.0814	pCi/g			2.04	2
Lead-212	0.349			0.3628		0.0790		0.0607	pCi/g			0.23	2
Lead-214	0.272			0.1872		0.0637		0.0883	pCi/g			1.59	2
Potassium-40	2.55			3.946		0.823		0.253	pCi/g			2.40	2
Radium-226	0.0850	U		0.2262		0.0808	1.00	0.0814	pCi/g			2.04	2
Thorium-232	0.318			0.3911		0.121		0.0641	pCi/g			0.58	2
Americium-241	0.0540	U		0.01370	U	0.109		0.189	pCi/g			0.46	2
Cesium-137	-0.0210	U		0.01699	U	0.0410		0.0720	pCi/g			0.62	2
Cobalt-60	0.00600	U		0.01701	U	0.0150		0.0251	pCi/g			0.68	2
Europium-152	0.0447	U		0.08362	U	0.122		0.119	pCi/g			0.51	2
Europium-154	-0.0358	U		-0.03557	U	0.0584		0.0992	pCi/g			0.01	2
Europium-155	-0.00431	U		-0.00608	U	0.0147		0.347	pCi/g			0.03	2
Sodium-22	-0.00284	U		0.01970	U	0.0159		0.0242	pCi/g			1.05	2
Zinc-65	-0.106	U		-0.01371	U	0.113		0.203	pCi/g			1.27	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: 160-43124-D-26-M DU
Matrix: Solid
Analysis Batch: 528801

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526820

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.375	U		-0.02204	U	0.860	5.00	1.50	pCi/g			0.63	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*90.7*		*40 - 110*

Lab Sample ID: MB 160-527389/1-A
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527389

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.7503	U	1.00	1.01	5.00	1.73	pCi/g	09/16/21 12:04	09/22/21 17:15	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: MB 160-527389/1-A
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527389

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	85.2		40 - 110	09/16/21 12:04	09/22/21 17:15	1

Lab Sample ID: LCS 160-527389/2-A
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527389

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	21.68		2.89	5.00	1.93	pCi/g	101	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni	71.6		40 - 110

Lab Sample ID: 160-43157-D-17-J DU
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527389

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	-0.336	U		-0.1196	U	1.04	5.00	1.84	pCi/g			0.30	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni	78.2		40 - 110

Metals

Prep Batch: 549130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	3050B	
160-43154-2	FSS-083-081921	Total/NA	Solid	3050B	
160-43154-3	FSS-084-081921	Total/NA	Solid	3050B	
160-43154-7	FSS-085-081921	Total/NA	Solid	3050B	
160-43154-8	FSS-086-081921	Total/NA	Solid	3050B	
160-43154-9	FSS-087-081921	Total/NA	Solid	3050B	
160-43154-10	FSS-091-081921	Total/NA	Solid	3050B	
160-43154-11	FSS-092-081921	Total/NA	Solid	3050B	
160-43154-12	FSS-093-081921	Total/NA	Solid	3050B	
MB 280-549130/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549130/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 280-549130/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
160-43154-7MS	FSS-085-081921	Total/NA	Solid	3050B	
160-43154-7MSD	FSS-085-081921	Total/NA	Solid	3050B	
160-43154-8 MS	FSS-086-081921	Total/NA	Solid	3050B	
160-43154-8 MSD	FSS-086-081921	Total/NA	Solid	3050B	
160-43154-9 MS	FSS-087-081921	Total/NA	Solid	3050B	
160-43154-9 MSD	FSS-087-081921	Total/NA	Solid	3050B	

Prep Batch: 549365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	7471B	
160-43154-2	FSS-083-081921	Total/NA	Solid	7471B	
160-43154-3	FSS-084-081921	Total/NA	Solid	7471B	
160-43154-7	FSS-085-081921	Total/NA	Solid	7471B	
160-43154-8	FSS-086-081921	Total/NA	Solid	7471B	
160-43154-9	FSS-087-081921	Total/NA	Solid	7471B	
160-43154-10	FSS-091-081921	Total/NA	Solid	7471B	
160-43154-11	FSS-092-081921	Total/NA	Solid	7471B	
160-43154-12	FSS-093-081921	Total/NA	Solid	7471B	
MB 280-549365/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549365/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549365/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43154-7MS	FSS-085-081921	Total/NA	Solid	7471B	
160-43154-7MSD	FSS-085-081921	Total/NA	Solid	7471B	
160-43154-8 MS	FSS-086-081921	Total/NA	Solid	7471B	
160-43154-8 MSD	FSS-086-081921	Total/NA	Solid	7471B	
160-43154-9 MS	FSS-087-081921	Total/NA	Solid	7471B	
160-43154-9 MSD	FSS-087-081921	Total/NA	Solid	7471B	

Analysis Batch: 549986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	6020B	549130
160-43154-2	FSS-083-081921	Total/NA	Solid	6020B	549130
160-43154-3	FSS-084-081921	Total/NA	Solid	6020B	549130
160-43154-7	FSS-085-081921	Total/NA	Solid	6020B	549130
160-43154-8	FSS-086-081921	Total/NA	Solid	6020B	549130
160-43154-9	FSS-087-081921	Total/NA	Solid	6020B	549130
160-43154-10	FSS-091-081921	Total/NA	Solid	6020B	549130
160-43154-11	FSS-092-081921	Total/NA	Solid	6020B	549130
160-43154-12	FSS-093-081921	Total/NA	Solid	6020B	549130

Metals (Continued)

Analysis Batch: 549986 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-549130/1-A	Method Blank	Total/NA	Solid	6020B	549130
LCS 280-549130/2-A	Lab Control Sample	Total/NA	Solid	6020B	549130
LCSD 280-549130/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	549130
160-43154-7MS	FSS-085-081921	Total/NA	Solid	6020B	549130
160-43154-7MSD	FSS-085-081921	Total/NA	Solid	6020B	549130
160-43154-8 MS	FSS-086-081921	Total/NA	Solid	6020B	549130
160-43154-8 MSD	FSS-086-081921	Total/NA	Solid	6020B	549130
160-43154-9 MS	FSS-087-081921	Total/NA	Solid	6020B	549130
160-43154-9 MSD	FSS-087-081921	Total/NA	Solid	6020B	549130

Analysis Batch: 550080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	7471B	549365
160-43154-2	FSS-083-081921	Total/NA	Solid	7471B	549365
160-43154-3	FSS-084-081921	Total/NA	Solid	7471B	549365
160-43154-7	FSS-085-081921	Total/NA	Solid	7471B	549365
160-43154-8	FSS-086-081921	Total/NA	Solid	7471B	549365
160-43154-9	FSS-087-081921	Total/NA	Solid	7471B	549365
160-43154-10	FSS-091-081921	Total/NA	Solid	7471B	549365
160-43154-11	FSS-092-081921	Total/NA	Solid	7471B	549365
160-43154-12	FSS-093-081921	Total/NA	Solid	7471B	549365
MB 280-549365/1-A	Method Blank	Total/NA	Solid	7471B	549365
LCS 280-549365/2-A	Lab Control Sample	Total/NA	Solid	7471B	549365
LCSD 280-549365/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549365
160-43154-7MS	FSS-085-081921	Total/NA	Solid	7471B	549365
160-43154-7MSD	FSS-085-081921	Total/NA	Solid	7471B	549365
160-43154-8 MS	FSS-086-081921	Total/NA	Solid	7471B	549365
160-43154-8 MSD	FSS-086-081921	Total/NA	Solid	7471B	549365
160-43154-9 MS	FSS-087-081921	Total/NA	Solid	7471B	549365
160-43154-9 MSD	FSS-087-081921	Total/NA	Solid	7471B	549365

General Chemistry

Analysis Batch: 548553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	Moisture	
160-43154-2	FSS-083-081921	Total/NA	Solid	Moisture	
160-43154-3	FSS-084-081921	Total/NA	Solid	Moisture	
160-43154-7	FSS-085-081921	Total/NA	Solid	Moisture	
160-43154-8	FSS-086-081921	Total/NA	Solid	Moisture	
160-43154-9	FSS-087-081921	Total/NA	Solid	Moisture	
160-43154-10	FSS-091-081921	Total/NA	Solid	Moisture	
160-43154-11	FSS-092-081921	Total/NA	Solid	Moisture	
160-43154-12	FSS-093-081921	Total/NA	Solid	Moisture	
160-43154-9 DU	FSS-087-081921	Total/NA	Solid	Moisture	

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	Dry and Grind	
160-43154-2	FSS-083-081921	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 523700 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-3	FSS-084-081921	Total/NA	Solid	Dry and Grind	
160-43154-7	FSS-085-081921	Total/NA	Solid	Dry and Grind	
160-43154-8	FSS-086-081921	Total/NA	Solid	Dry and Grind	
160-43154-9	FSS-087-081921	Total/NA	Solid	Dry and Grind	
160-43154-10	FSS-091-081921	Total/NA	Solid	Dry and Grind	
160-43154-11	FSS-092-081921	Total/NA	Solid	Dry and Grind	
160-43154-12	FSS-093-081921	Total/NA	Solid	Dry and Grind	
160-43154-9 DU	FSS-087-081921	Total/NA	Solid	Dry and Grind	
160-43157-D-17-J DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43157-D-24-D DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 523723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-27-J DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-26-M DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43124-D-27-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 524254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-2	FSS-083-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-3	FSS-084-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-7	FSS-085-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-8	FSS-086-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-9	FSS-087-081921	Total/NA	Solid	Fill_Geo-21	523700
LCS 160-524254/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43154-9 DU	FSS-087-081921	Total/NA	Solid	Fill_Geo-21	523700

Prep Batch: 524257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-10	FSS-091-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-11	FSS-092-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-12	FSS-093-081921	Total/NA	Solid	Fill_Geo-21	523700
MB 160-524257/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-524257/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43157-D-24-D DU	Duplicate	Total/NA	Solid	Fill_Geo-21	523700

Leach Batch: 524351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-A-30-H DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 525615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	ExtChrom	523700
160-43154-2	FSS-083-081921	Total/NA	Solid	ExtChrom	523700
160-43154-3	FSS-084-081921	Total/NA	Solid	ExtChrom	523700
160-43154-7	FSS-085-081921	Total/NA	Solid	ExtChrom	523700
160-43154-8	FSS-086-081921	Total/NA	Solid	ExtChrom	523700

Rad (Continued)

Prep Batch: 525615 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-9	FSS-087-081921	Total/NA	Solid	ExtChrom	523700
160-43154-10	FSS-091-081921	Total/NA	Solid	ExtChrom	523700
160-43154-11	FSS-092-081921	Total/NA	Solid	ExtChrom	523700
160-43154-12	FSS-093-081921	Total/NA	Solid	ExtChrom	523700
MB 160-525615/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525615/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-27-F DU	Duplicate	Total/NA	Solid	ExtChrom	524231

Prep Batch: 525621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	Leach_Precip	
160-43154-2	FSS-083-081921	Total/NA	Solid	Leach_Precip	
160-43154-3	FSS-084-081921	Total/NA	Solid	Leach_Precip	
160-43154-7	FSS-085-081921	Total/NA	Solid	Leach_Precip	
160-43154-8	FSS-086-081921	Total/NA	Solid	Leach_Precip	
160-43154-9	FSS-087-081921	Total/NA	Solid	Leach_Precip	
160-43154-10	FSS-091-081921	Total/NA	Solid	Leach_Precip	
160-43154-11	FSS-092-081921	Total/NA	Solid	Leach_Precip	
160-43154-12	FSS-093-081921	Total/NA	Solid	Leach_Precip	

Prep Batch: 525622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	ExtChrom	523700
160-43154-2	FSS-083-081921	Total/NA	Solid	ExtChrom	523700
160-43154-3	FSS-084-081921	Total/NA	Solid	ExtChrom	523700
160-43154-7	FSS-085-081921	Total/NA	Solid	ExtChrom	523700
160-43154-8	FSS-086-081921	Total/NA	Solid	ExtChrom	523700
160-43154-9	FSS-087-081921	Total/NA	Solid	ExtChrom	523700
160-43154-10	FSS-091-081921	Total/NA	Solid	ExtChrom	523700
160-43154-11	FSS-092-081921	Total/NA	Solid	ExtChrom	523700
160-43154-12	FSS-093-081921	Total/NA	Solid	ExtChrom	523700
LCS 160-525622/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-27-J DU	Duplicate	Total/NA	Solid	ExtChrom	523723

Prep Batch: 526292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-2	FSS-083-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-3	FSS-084-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-7	FSS-085-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-8	FSS-086-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-9	FSS-087-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-10	FSS-091-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-11	FSS-092-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-12	FSS-093-081921	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526292/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526292/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43154-11 MS	FSS-092-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-1 DU	FSS-082-081921	Total/NA	Solid	LSC_Dist_Susp	

Rad

Prep Batch: 526820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-2	FSS-083-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-3	FSS-084-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-7	FSS-085-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-8	FSS-086-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-9	FSS-087-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43124-D-26-M DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	524231

Prep Batch: 527389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-10	FSS-091-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-11	FSS-092-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-12	FSS-093-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
MB 160-527389/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-527389/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43157-D-17-J DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	523700

Prep Batch: 527652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	DPS-7	523700
160-43154-2	FSS-083-081921	Total/NA	Solid	DPS-7	523700
160-43154-3	FSS-084-081921	Total/NA	Solid	DPS-7	523700
160-43154-7	FSS-085-081921	Total/NA	Solid	DPS-7	523700
160-43154-8	FSS-086-081921	Total/NA	Solid	DPS-7	523700
160-43154-9	FSS-087-081921	Total/NA	Solid	DPS-7	523700
160-43154-10	FSS-091-081921	Total/NA	Solid	DPS-7	523700
160-43154-11	FSS-092-081921	Total/NA	Solid	DPS-7	523700
160-43154-12	FSS-093-081921	Total/NA	Solid	DPS-7	523700
MB 160-527652/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527652/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43195-A-30-H DU	Duplicate	Total/NA	Solid	DPS-7	524351

Prep Batch: 527842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-1	FSS-082-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-2	FSS-083-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-3	FSS-084-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-7	FSS-085-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-8	FSS-086-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-9	FSS-087-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-10	FSS-091-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-11	FSS-092-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-12	FSS-093-081921	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527842/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527842/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43154-1 MS	FSS-082-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-1 DU	FSS-082-081921	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43154-1	FSS-082-081921	78.7	99.8
160-43154-2	FSS-083-081921	81.3	101
160-43154-3	FSS-084-081921	80.7	99.8
160-43154-7	FSS-085-081921	79.5	102
160-43154-8	FSS-086-081921	79.2	98.7
160-43154-9	FSS-087-081921	79.9	98.7
160-43154-10	FSS-091-081921	82.7	98.7
160-43154-11	FSS-092-081921	79.0	96.8
160-43154-12	FSS-093-081921	70.7	98.3
160-43195-A-30-H DU	Duplicate	75.1	103
LCS 160-527652/2-A	Lab Control Sample	87.5	100
MB 160-527652/1-A	Method Blank	84.6	98.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
160-43124-D-27-F DU	Duplicate	86.0
160-43154-1	FSS-082-081921	84.0
160-43154-2	FSS-083-081921	93.1
160-43154-3	FSS-084-081921	76.2
160-43154-7	FSS-085-081921	64.5
160-43154-8	FSS-086-081921	62.9
160-43154-9	FSS-087-081921	76.8
160-43154-10	FSS-091-081921	55.7
160-43154-11	FSS-092-081921	51.3
160-43154-12	FSS-093-081921	70.6
LCS 160-525615/2-A	Lab Control Sample	79.6
MB 160-525615/1-A	Method Blank	89.6

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	(30-110)
160-43124-D-27-J DU	Duplicate	72.3
160-43154-1	FSS-082-081921	69.5
160-43154-2	FSS-083-081921	78.5
160-43154-3	FSS-084-081921	82.8
160-43154-7	FSS-085-081921	70.1
160-43154-8	FSS-086-081921	64.5

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43154-9	FSS-087-081921	75.4						
160-43154-10	FSS-091-081921	67.3						
160-43154-11	FSS-092-081921	60.1						
160-43154-12	FSS-093-081921	67.0						
LCS 160-525622/2-A	Lab Control Sample	84.7						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43124-D-26-M DU	Duplicate	90.7						
160-43154-1	FSS-082-081921	101						
160-43154-2	FSS-083-081921	101						
160-43154-3	FSS-084-081921	102						
160-43154-7	FSS-085-081921	92.7						
160-43154-8	FSS-086-081921	86.5						
160-43154-9	FSS-087-081921	90.2						
160-43154-10	FSS-091-081921	98.5						
160-43154-11	FSS-092-081921	93.6						
160-43154-12	FSS-093-081921	84.9						
160-43157-D-17-J DU	Duplicate	78.2						
LCS 160-527389/2-A	Lab Control Sample	71.6						
MB 160-527389/1-A	Method Blank	85.2						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43154-1	FSS-082-081921	84.0						
160-43154-2	FSS-083-081921	93.1						
160-43154-3	FSS-084-081921	76.2						
160-43154-7	FSS-085-081921	64.5						
160-43154-8	FSS-086-081921	62.9						
160-43154-9	FSS-087-081921	76.8						
160-43154-10	FSS-091-081921	55.7						
160-43154-11	FSS-092-081921	51.3						
160-43154-12	FSS-093-081921	70.6						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/27/2021
Sample Receipt Date	08/25/2021
RJ Lee Group Job No.	AOH1063241-0
Authorization/P.O. No.	
Client Job No./Name	160-43154-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546504.HPL	FSS-082-081921 (160-43154-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546505.HPL	FSS-083-081921 (160-43154-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546506.HPL	FSS-084-081921 (160-43154-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43154-1 RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546507.HPL	FSS-085-081921 (160-43154-4) 88	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546508.HPL	FSS-086-081921 (160-43154-5) 89	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546509.HPL	FSS-087-081921 (160-43154-6) 90	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546510.HPL	FSS-084-081921 (160-43154-7) 85	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546511.HPL	FSS-083-081921 (160-43154-8) 86	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43154-1 RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546512.HPL	FSS-090-081921 (160-43154-9) 87	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546513.HPL	FSS-091-081921 (160-43154-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546514.HPL	FSS-092-081921 (160-43154-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546515.HPL	FSS-093-081921 (160-43154-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43154-1

RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A. Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43154-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/8/2021 7:05:16 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-43154-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43154-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/20/2021 8:41 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 23.8º C.

Receipt Exceptions

Job ID: 160-43154-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples are logged in for MS and/or MSD analysis using the client sample ID as a parent sample ID, and the same ID with MS or MSD on the end is used for the spikes. This allows the system to calculate the QC statistics for sample duplicates. This was unknown to the client at the time the revised COC was delivered. The result was that three samples for three project points (one for each point) were analyzed in duplicate. One of each sample had an MS/MSD analyzed with it. The duplicate sample only results were reported in job 160-43145-2. Refer to Table 1 (Job 160-43154-1 - Updated Sample IDs) after the case narrative for a summary of this information.

ASBESTOS
An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis. The report supplied by RJ LEE was annotated by the lab to account for the sample ID updates listed in the receipt exceptions section of the narrative.

METALS (ICP/MS)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/15/2021 and analyzed on 09/16/2021.

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

MERCURY (CVAA)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared and analyzed on 09/15/2021.

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

PERCENT SOLIDS
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/01/2021.

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

STRONTIUM-90 (GFPC)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/23/2021, prepared on 09/20/2021 and analyzed on 10/04/2021.

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

TRITIUM
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/10/2021 and analyzed on 09/16/2021.

Preparation Batch 160-526292
The sample exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: FSS-088-081921 (160-43154-4).

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/23/2021, prepared on 09/05/2021 and analyzed on 09/14/2021 and 09/15/2021.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for

Job ID: 160-43154-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/23/2021, prepared on 09/05/2021 and analyzed on 09/14/2021 and 09/15/2021.

Preparation Batch 160-525622:
The daily pulser check was inadvertently not performed on the detector on the day it was used to count the sample. However, the day before and the day after the sample was counted, the daily pulser check was performed and was within acceptable QC limits demonstrating detector stability. In addition, tracer recovery was in range and the count met the detection goal indicating no adverse effect. FSS-089-081921 (160-43154-5).

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

CARBON-14 BY LSC
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/21/2021 and analyzed on 09/22/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/23/2021, prepared on 08/26/2021 and analyzed on 09/18/2021 and 09/20/2021.

Preparation Batch 160-524254:
The replicate precision for Pb-212 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (160-43154-D-9-F DU).

For samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5), FSS-090-081921 (160-43154-6), (LCS 160-524254/2-A), (MB 160-524254/1-A), (160-43154-D-9-E), and (160-43154-D-9-F DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227

Job ID: 160-43154-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/23/2021, prepared on 09/13/2021 and analyzed on 09/22/2021.

Preparation Batch 160-526820:
The Method Blank (MB) had activity above the MDC. However the activities for the samples and method blank were less than the requested limit; therefore, the data was reported: FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5), FSS-090-081921 (160-43154-
(LCS 160-526820/2-A), (MB 160-526820/1-A), (160-43124-D-26-H), and (160-43124-D-26-M DU).

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

PLUTONIUM 241

Samples FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5) and FSS-090-081921 (160-43154-6) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/05/2021 and analyzed on 09/25/2021.

Preparation Batch 160-525621:
The Laboratory Control Sample (LCS) recovered above the upper QC limit at 129% (125%). The sample activities were less than the MDC; therefore, the data was reported: FSS-088-081921 (160-43154-4), FSS-089-081921 (160-43154-5), FSS-090-081921 (160-43154-6), (LCS 160-525621/2-A), (MB 160-525621/1-A), (160-43124-D-27-G), and (160-43124-D-27-H DU).

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

Table 1. Job 160-43154-1 - Updated Sample IDs				
Project Sample Point	Lab sample ID	Initial Client Sample ID	Revised Client Sample ID	Results Reported in Job #
SU 7C - SS00090 0"-6"	160-43154-4	FSS-085-091921	FSS-088-091921	160-43154-2
SU 7C - SS00090 0"-6"	160-43154-7	FSS-088-091921	FSS-085-091921	160-43154-1
SU 7C - SS00090 0"-6"	160-43154-7MS	FSS-088-091921MS	FSS-085-091921MS	160-43154-1
SU 7C - SS00090 0"-6"	160-43154-7MSD	FSS-088-091921MSD	FSS-085-091921MSD	160-43154-1
SU 7C - SS00090 6"-12"	160-43154-5	FSS-086-091921	FSS-089-091921	160-43154-2
SU 7C - SS00090 6"-12"	160-43154-8	FSS-089-091921	FSS-086-091921	160-43134-1
SU 7C - SS00090 6"-12"	160-43154-8MS	FSS-089-091921MS	FSS-086-091921MS	160-43134-1
SU 7C - SS00090 6"-12"	160-43154-8MSD	FSS-089-091921MSD	FSS-086-091921MSD	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-6	FSS-087-091921	FSS-090-091921	160-43154-2
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921	FSS-087-091921	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921MS	FSS-087-091921MS	160-43134-1
SU 7C - SS00090 18"-24"	160-43154-9	FSS-090-091921MSD	FSS-087-091921MSD	160-43134-1

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

160-43154 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing TestAmerica

☐ W ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-19-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	3 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-082-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 0"-6"
FSS-083-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 6"-12"
FSS-084-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS010 18"-24"
FSS-085-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 0"-6"
FSS-086-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 6"-12"
FSS-087-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 18"-24"
FSS-088-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 0"-6" MS/MSD
FSS-089-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 6"-12" MS/MSD
FSS-090-081921	19-Aug	13:15	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS009 18"-24" MS/~~MD~~ MSD
FSS-091-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 0"-6"
FSS-092-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 6"-12"
FSS-093-081921	19-Aug	14:45	C	S	3	N	y	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____	
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-19-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Sierra Worthington	Company: GTAST2	Date/Time: 8/20/21 0841
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☑Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-19-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___3___ of ___3___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC							Sample Specific Notes:
FSS-082-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 0"-6"
FSS-083-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 6"-12"
FSS-084-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS010 18"-24"
FSS-085-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 0"-6"
FSS-086-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 6"-12"
FSS-087-081921	19-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS009 18"-24"
~~FSS-088-081921~~ FSS-085-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 0"-6" MS/MSD
~~FSS-089-081921~~ FSS-086-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 6"-12" MS/MSD
~~FSS-090-081921~~ FSS-087-081921MS/MSD	19-Aug	13:15	C	S	3	N	y			1	1	1													SU 7C - SS009 18"-24" MS/MD
FSS-091-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 0"-6"
FSS-092-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 6"-12"
FSS-093-081921	19-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1							SU 7C - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155
Note: FSS-085 through -087 have corresponding MS/MSD requests and are shown in duplicate. Original (strike-out) IDs for -088 through -090 are no longer valid sample IDs.

Revised COC Rcd TA -

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-19-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217993.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA, DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 4955 Yarrow Street.	Due Date Requested: 10/3/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code								
FSS-082-081921 (160-43154-1)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-083-081921 (160-43154-2)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-084-081921 (160-43154-3)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-085-081921 (160-43154-4)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-086-081921 (160-43154-5)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-087-081921 (160-43154-6)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-088-081921 (160-43154-7)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-088-081921 (160-43154-7MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-088-081921 (160-43154-7MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment
Relinquished by: Michael Kemerling	Date/Time: 8/23/2021 17:00	Company: ETA SL	Received by:	Date/Time: 08/23/2021 1420	Company: ETA SL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 18.9 IR11 T1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217993.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/3/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD6/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD6/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-089-081921 (160-43154-8)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-089-081921 (160-43154-8MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-089-081921 (160-43154-8MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	
FSS-090-081921 (160-43154-9)	8/19/21	13:15 Eastern		Solid			X	X	X	1	
FSS-090-081921 (160-43154-9MS)	8/19/21	13:15 Eastern	MS	Solid			X	X	X	1	
FSS-090-081921 (160-43154-9MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	X	X	1	
FSS-091-081921 (160-43154-10)	8/19/21	14:45 Eastern		Solid			X	X	X	1	
FSS-092-081921 (160-43154-11)	8/19/21	14:45 Eastern		Solid			X	X	X	1	
FSS-093-081921 (160-43154-12)	8/19/21	14:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification		**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**	
Unconfirmed		☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:	
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Mitchell Kerlin Hinger	Date/Time: 8/23/2021 17:00	Company: EA STL	Received by:
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: 8/24/2021 1420 Company: EATHEN
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: Company:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:

Ver: 08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063241-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-082-081921 (160-43154-1)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-083-081921 (160-43154-2)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-084-081921 (160-43154-3)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-085-081921 (160-43154-4)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-086-081921 (160-43154-5)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-087-081921 (160-43154-6)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-088-081921 (160-43154-7)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-7MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-7MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/23/2021 17:00	ETA SL	[signature]	08252021 1:00pm	RJLeeGroup
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH1063241-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43154-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-088-081921 (160-43154-8)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-8MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43154-8MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9)	8/19/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9MS)	8/19/21	13:15 Eastern	MS	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43154-9MSD)	8/19/21	13:15 Eastern	MSD	Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-091-081921 (160-43154-10)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-092-081921 (160-43154-11)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-093-081921 (160-43154-12)	8/19/21	14:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

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Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Cunningham	8/23/2021 17:00	ETA SV	Linda Traugu	08/25/21 1:00PM	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43154-2

Login Number: 43154
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43154-2

Login Number: 43154
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/25/21 08:10 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43154-2
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43154-4	FSS-088-081921	Solid	08/19/21 13:15	08/20/21 08:41
160-43154-5	FSS-089-081921	Solid	08/19/21 13:15	08/20/21 08:41
160-43154-6	FSS-090-081921	Solid	08/19/21 13:15	08/20/21 08:41

Client Sample ID: FSS-088-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-4

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.00818	U	0.164	0.164	3.00	0.298	pCi/g	09/20/21 10:28	10/04/21 17:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.5*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:22*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:22*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.435	U	0.235	0.238	1.00	0.494	pCi/g	09/10/21 15:03	09/16/21 18:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00882	U	0.0173	0.0173	1.00	0.0265	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.000	U	0.00433	0.00433	1.00	0.0265	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.1*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.179**		0.0923	0.0934	1.00	0.0995	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.0122	U	0.0120	0.0120	1.00	0.0817	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.123**		0.0760	0.0767	1.00	0.0865	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*68.0*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.125	U	0.773	0.774	5.00	1.36	pCi/g	09/21/21 10:06	09/22/21 18:57	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.532**		0.148	0.157		0.0924	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Bismuth-212	-0.300	U	0.662	0.662		1.16	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Bismuth-214	**0.362**		0.124	0.129		0.120	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Lead-212	**0.438**		0.0871	0.0979		0.0880	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Lead-214	**0.380**		0.0949	0.102		0.108	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Potassium-40	**3.26**		0.780	0.844		0.358	pCi/g	08/26/21 12:50	09/18/21 15:58	1

Client Sample ID: FSS-088-081921

Lab Sample ID: 160-43154-4
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.362**		0.124	0.129	1.00	0.120	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Thorium-232	**0.532**		0.148	0.157		0.0924	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Americium-241	0.0612	U	0.145	0.145		0.249	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Cesium-137	-0.00887	U	0.0643	0.0643		0.116	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Cobalt-60	-0.00440	U	0.0175	0.0175		0.0888	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Europium-152	0.0962	U	0.134	0.135		0.414	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Europium-154	0.0172	U	0.0750	0.0750		0.112	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Europium-155	0.000	U	0.0995	0.0995		0.545	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Sodium-22	0.0124	U	0.0460	0.0461		0.0859	pCi/g	08/26/21 12:50	09/18/21 15:58	1
Zinc-65	0.000	U	0.0327	0.0327		0.157	pCi/g	08/26/21 12:50	09/18/21 15:58	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.303	U	0.675	0.676	5.00	1.16	pCi/g	09/13/21 15:48	09/22/21 07:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*117*	*Q*	*40 - 110*	*09/13/21 15:48*	*09/22/21 07:38*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.636	U	1.09	1.09	5.00	1.78	pCi/g	09/05/21 20:20	09/25/21 03:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.1*		*30 - 110*	*09/05/21 20:20*	*09/25/21 03:11*	*1*

Client Sample ID: FSS-088-081921

Lab Sample ID: 160-43154-4
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 98.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**12**		0.29	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 02:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**20**		19	6.3	ug/Kg	☼	09/15/21 15:00	09/15/21 16:49	1

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43154-5
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.00339	U	0.173	0.173	3.00	0.316	pCi/g	09/20/21 10:28	10/04/21 17:22	1

Client Sample ID: FSS-089-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-5

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.1		40 - 110	09/20/21 10:28	10/04/21 17:22	1
Y Carrier	101		40 - 110	09/20/21 10:28	10/04/21 17:22	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.270	U	0.254	0.255	1.00	0.499	pCi/g	09/10/21 15:03	09/16/21 19:18	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00249	U	0.00488	0.00489	1.00	0.0482	pCi/g	09/05/21 17:56	09/14/21 17:39	1
Plutonium-239/240	0.000	U	0.00489	0.00489	1.00	0.0299	pCi/g	09/05/21 17:56	09/14/21 17:39	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	69.7		30 - 110	09/05/21 17:56	09/14/21 17:39	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.122**		0.0707	0.0714	1.00	0.0615	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-235/236	0.0124	U	0.0242	0.0243	1.00	0.0371	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-238	**0.181**		0.0852	0.0864	1.00	0.0614	pCi/g	09/05/21 20:32	09/15/21 22:19	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	67.7		30 - 110	09/05/21 20:32	09/15/21 22:19	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.223	U	0.721	0.722	5.00	1.26	pCi/g	09/21/21 10:06	09/22/21 19:19	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.450**		0.107	0.116		0.120	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Bismuth-212	0.222	U	0.473	0.474		0.829	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Bismuth-214	**0.219**		0.0774	0.0805		0.0918	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Lead-212	0.0317	U	0.0783	0.0784		0.135	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Lead-214	**0.276**		0.0849	0.0894		0.0829	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Potassium-40	**3.00**		0.712	0.773		0.582	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Radium-226	**0.219**		0.0774	0.0805	1.00	0.0918	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Thorium-232	**0.450**		0.107	0.116		0.120	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Americium-241	0.0461	U	0.0931	0.0932		0.159	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Cesium-137	-0.0348	U	0.0548	0.0549		0.0936	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Cobalt-60	0.0275	U	0.0149	0.0151		0.0495	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Europium-152	0.0962	U	0.0858	0.0864		0.140	pCi/g	08/26/21 12:50	09/20/21 12:48	1

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43154-5
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	**0.129**		0.0527	0.0544		0.0941	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Europium-155	0.0141	U	0.0603	0.0603		0.387	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Sodium-22	**0.0312**		0.0204	0.0206		0.0255	pCi/g	08/26/21 12:50	09/20/21 12:48	1
Zinc-65	0.0574	U	0.107	0.108		0.186	pCi/g	08/26/21 12:50	09/20/21 12:48	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.327	U	0.978	0.978	5.00	1.73	pCi/g	09/13/21 15:48	09/22/21 08:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.7*		*40 - 110*	*09/13/21 15:48*	*09/22/21 08:44*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.30	U	1.25	1.25	5.00	2.14	pCi/g	09/05/21 20:20	09/25/21 04:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.7*		*30 - 110*	*09/05/21 20:20*	*09/25/21 04:17*	*1*

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43154-5
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41
Percent Solids: 84.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.6**		0.30	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 02:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**14**	**J**	23	7.6	ug/Kg	☼	09/15/21 15:00	09/15/21 16:51	1

Client Sample ID: FSS-090-081921

Lab Sample ID: 160-43154-6
Date Collected: 08/19/21 13:15
Matrix: Solid
Date Received: 08/20/21 08:41

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.00337	U	0.157	0.157	3.00	0.289	pCi/g	09/20/21 10:28	10/04/21 17:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.3*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:23*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:23*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Client Sample ID: FSS-090-081921

Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Lab Sample ID: 160-43154-6

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.334	U	0.238	0.240	1.00	0.479	pCi/g	09/10/21 15:03	09/16/21 19:41	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0159	U	0.0266	0.0266	1.00	0.0937	pCi/g	09/05/21 17:56	09/15/21 22:21	1
Plutonium-239/240	-0.00798	U	0.00903	0.00906	1.00	0.0658	pCi/g	09/05/21 17:56	09/15/21 22:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*64.4*		*30 - 110*	*09/05/21 17:56*	*09/15/21 22:21*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.158**		0.0879	0.0889	1.00	0.0911	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.0166	U	0.0146	0.0147	1.00	0.0947	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.0801**		0.0597	0.0600	1.00	0.0598	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*61.7*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.400	U	0.700	0.702	5.00	1.20	pCi/g	09/21/21 10:06	09/22/21 19:42	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.515**		0.205	0.212		0.262	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Bismuth-212	0.442	U	0.842	0.843		1.46	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Bismuth-214	**0.313**		0.112	0.116		0.120	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Lead-212	**0.305**		0.0763	0.0824		0.0843	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Lead-214	**0.245**		0.0948	0.0979		0.110	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Potassium-40	**3.76**		1.01	1.08		0.690	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Radium-226	**0.313**		0.112	0.116	1.00	0.120	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Thorium-232	**0.515**		0.205	0.212		0.262	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Americium-241	0.0542	U	0.142	0.142		0.245	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Cesium-137	-0.0466	U	0.0762	0.0763		0.130	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Cobalt-60	0.00866	U	0.0206	0.0207		0.0669	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Europium-152	0.0950	U	0.0777	0.0783		0.200	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Europium-154	0.0395	U	0.0649	0.0650		0.128	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Europium-155	-0.0967	U	0.331	0.331		0.565	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Sodium-22	**0.0375**		0.0260	0.0262		0.0346	pCi/g	08/26/21 12:50	09/20/21 12:49	1
Zinc-65	0.000	U	0.0232	0.0232		0.240	pCi/g	08/26/21 12:50	09/20/21 12:49	1

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Client Sample ID: FSS-090-081921

Lab Sample ID: 160-43154-6
Matrix: Solid
Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0922	U	0.767	0.767	5.00	1.34	pCi/g	09/13/21 15:48	09/22/21 09:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.5*		*40 - 110*	*09/13/21 15:48*	*09/22/21 09:50*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.55	U	1.30	1.31	5.00	2.23	pCi/g	09/05/21 20:20	09/25/21 05:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*64.4*		*30 - 110*	*09/05/21 20:20*	*09/25/21 05:24*	*1*

Client Sample ID: FSS-090-081921

Lab Sample ID: 160-43154-6
Matrix: Solid
Date Collected: 08/19/21 13:15
Date Received: 08/20/21 08:41
Percent Solids: 83.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.1		0.31	0.019	mg/Kg	☼	09/15/21 07:52	09/16/21 02:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	12	J	21	6.8	ug/Kg	☼	09/15/21 15:00	09/15/21 16:54	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-525622/1-A
Matrix: Solid
Analysis Batch: 527170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525622

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01076	U	0.0313	0.0313	1.00	0.0677	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-235/236	0.005358	U	0.0223	0.0223	1.00	0.0600	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-238	0.004297	U	0.0260	0.0260	1.00	0.0645	pCi/g	09/05/21 20:32	09/15/21 22:19	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.8*		*30 - 110*	*09/05/21 20:32*	*09/15/21 22:19*	*1*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-524254/1-A
Matrix: Solid
Analysis Batch: 527646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524254

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.1036	U	0.188	0.189		0.230	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Bismuth-212	0.4004	U	1.22	1.22		2.14	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Bismuth-214	-0.02352	U	0.190	0.190		0.341	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Lead-212	-0.04095	U	0.111	0.112		0.199	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Lead-214	0.05834	U	0.0960	0.0962		0.161	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Potassium-40	0.4077	U	0.853	0.854		0.960	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Radium-226	-0.02352	U	0.190	0.190	1.00	0.341	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Thorium-232	0.1036	U	0.188	0.189		0.230	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Americium-241	-0.05699	U	0.160	0.160		0.277	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Cesium-137	0.0000	U	0.0131	0.0131		0.0683	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Cobalt-60	-0.004496	U	0.0746	0.0746		0.0931	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-152	0.04512	U	0.110	0.110		0.165	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-154	-0.02492	U	0.0736	0.0736		0.129	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Europium-155	-0.08839	U	0.311	0.311		0.534	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Sodium-22	-0.02825	U	0.0664	0.0665		0.120	pCi/g	08/26/21 12:50	09/20/21 16:24	1
Zinc-65	-0.02170	U	0.183	0.183		0.334	pCi/g	08/26/21 12:50	09/20/21 16:24	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-526820/1-A
Matrix: Solid
Analysis Batch: 528694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526820

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.355		0.765	0.777	5.00	1.22	pCi/g	09/13/21 15:48	09/23/21 21:33	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.9*		*40 - 110*	*09/13/21 15:48*	*09/23/21 21:33*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-526820/2-A
Matrix: Solid
Analysis Batch: 528694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526820

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	20.02		2.50	5.00	1.31	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*93.2*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-525621/1-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525621

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.3016	U	1.35	1.35	5.00	2.37	pCi/g	09/05/21 20:20	09/24/21 15:03	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 20:20*	*09/24/21 15:03*	*1*

Lab Sample ID: LCS 160-525621/2-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525621

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	25.63		3.61	5.00	3.12	pCi/g	129	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*79.6*		*30 - 110*

Lab Sample ID: 160-43124-D-27-H DU
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525621

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.46	U		0.8748	U	1.33	5.00	2.24	pCi/g			0.55	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*86.0*		*30 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Metals

Prep Batch: 549130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	3050B	
160-43154-5	FSS-089-081921	Total/NA	Solid	3050B	
160-43154-6	FSS-090-081921	Total/NA	Solid	3050B	

Prep Batch: 549365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	7471B	
160-43154-5	FSS-089-081921	Total/NA	Solid	7471B	
160-43154-6	FSS-090-081921	Total/NA	Solid	7471B	

Analysis Batch: 549986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	6020B	549130
160-43154-5	FSS-089-081921	Total/NA	Solid	6020B	549130
160-43154-6	FSS-090-081921	Total/NA	Solid	6020B	549130

Analysis Batch: 550080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	7471B	549365
160-43154-5	FSS-089-081921	Total/NA	Solid	7471B	549365
160-43154-6	FSS-090-081921	Total/NA	Solid	7471B	549365

General Chemistry

Analysis Batch: 548553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	Moisture	
160-43154-5	FSS-089-081921	Total/NA	Solid	Moisture	
160-43154-6	FSS-090-081921	Total/NA	Solid	Moisture	

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	Dry and Grind	
160-43154-5	FSS-089-081921	Total/NA	Solid	Dry and Grind	
160-43154-6	FSS-090-081921	Total/NA	Solid	Dry and Grind	

Prep Batch: 524254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-5	FSS-089-081921	Total/NA	Solid	Fill_Geo-21	523700
160-43154-6	FSS-090-081921	Total/NA	Solid	Fill_Geo-21	523700
MB 160-524254/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 525615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	ExtChrom	523700
160-43154-5	FSS-089-081921	Total/NA	Solid	ExtChrom	523700
160-43154-6	FSS-090-081921	Total/NA	Solid	ExtChrom	523700

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Rad

Prep Batch: 525621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	Leach_Precip	
160-43154-5	FSS-089-081921	Total/NA	Solid	Leach_Precip	
160-43154-6	FSS-090-081921	Total/NA	Solid	Leach_Precip	
MB 160-525621/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525621/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-D-27-H DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 525622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	ExtChrom	523700
160-43154-5	FSS-089-081921	Total/NA	Solid	ExtChrom	523700
160-43154-6	FSS-090-081921	Total/NA	Solid	ExtChrom	523700
MB 160-525622/1-A	Method Blank	Total/NA	Solid	ExtChrom	

Prep Batch: 526292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-5	FSS-089-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-6	FSS-090-081921	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 526820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-5	FSS-089-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43154-6	FSS-090-081921	Total/NA	Solid	Ext_Chrom_LSC	523700
MB 160-526820/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-526820/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	

Prep Batch: 527652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	DPS-7	523700
160-43154-5	FSS-089-081921	Total/NA	Solid	DPS-7	523700
160-43154-6	FSS-090-081921	Total/NA	Solid	DPS-7	523700

Prep Batch: 527842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43154-4	FSS-088-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-5	FSS-089-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43154-6	FSS-090-081921	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43154-2

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43154-4	FSS-088-081921	80.5	101
160-43154-5	FSS-089-081921	78.1	101
160-43154-6	FSS-090-081921	78.3	101

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
160-43154-4	FSS-088-081921	73.1
160-43154-5	FSS-089-081921	69.7
160-43154-6	FSS-090-081921	64.4

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	(30-110)
160-43154-4	FSS-088-081921	68.0
160-43154-5	FSS-089-081921	67.7
160-43154-6	FSS-090-081921	61.7
MB 160-525622/1-A	Method Blank	82.8

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ni
Lab Sample ID	Client Sample ID	(40-110)
160-43154-4	FSS-088-081921	117 Q
160-43154-5	FSS-089-081921	86.7
160-43154-6	FSS-090-081921	97.5
LCS 160-526820/2-A	Lab Control Sample	93.2
MB 160-526820/1-A	Method Blank	98.9

Tracer/Carrier Legend

Ni = Ni

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43154-2
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43124-D-27-H DU	Duplicate	86.0							
160-43154-4	FSS-088-081921	73.1							
160-43154-5	FSS-089-081921	69.7							
160-43154-6	FSS-090-081921	64.4							
LCS 160-525621/2-A	Lab Control Sample	79.6							
MB 160-525621/1-A	Method Blank	89.6							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/27/2021
Sample Receipt Date	08/25/2021
RJ Lee Group Job No.	AOH1063241-0
Authorization/P.O. No.	
Client Job No./Name	160-43154-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546504.HPL	FSS-082-081921 (160-43154-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546505.HPL	FSS-083-081921 (160-43154-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546506.HPL	FSS-084-081921 (160-43154-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43154-1 RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546507.HPL	FSS-085-081921 (160-43154-4) 88	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546508.HPL	FSS-086-081921 (160-43154-5) 89	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546509.HPL	FSS-087-081921 (160-43154-6) 90	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546510.HPL	FSS-084-081921 (160-43154-7) 85	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546511.HPL	FSS-083-081921 (160-43154-8) 86	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43154-1 RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546512.HPL	FSS-090-081921 (160-43154-9) 87	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546513.HPL	FSS-091-081921 (160-43154-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546514.HPL	FSS-092-081921 (160-43154-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546515.HPL	FSS-093-081921 (160-43154-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43154-1

RJ Lee Group Job No: AOH1063241-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A. Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.6
Samples FSS-094 through -114

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43157-1
Client Project/Site: BNL Decommissioning Project
Revision: 1

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/5/2021 11:40:29 AM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

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

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

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Job ID: 160-43157-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43157-1 - Revision 1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client. This revision adds results for additional nuclides for the gamma spectroscopy analysis.

RECEIPT

The samples were received on 8/21/2021 8:42 AM and 08/25/2021 08:33 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 18.0º C, 23.6º C and 26.9º C.

Job ID: 160-43157-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Receipt Exceptions
The asbestos and radiochemistry volume was not received for the following samples on 08/21/2021: FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), and FSS-102-082021 (160-43157-12).

The following samples were received at the laboratory outside the required temperature criteria at 18.9 °C in Denver: FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23), and FSS-114-082021 (160-43157-24).

ASBESTOS
An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)
Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/15/2021 and analyzed on 09/15/2021 and 09/16/2021.

Preparation Batch 280-549132, Analytical Batch 280-549978:
The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Preparation Batch 280-549130, Analytical Batch 280-549130:
The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Preparation Batch280-549986:
Lead failed the recovery criteria low for the MS of sample 160-43154-9. Lead exceeded the RPD limit for the MSD of sample 160-43154-9.

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

MERCURY (CVAA)
Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/15/2021 and analyzed on 09/15/2021 and 09/16/2021.

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

Job ID: 160-43157-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

PERCENT SOLIDS

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 08/31/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/23/2021 and 08/27/2021, prepared on 09/08/2021 and analyzed on 10/01/2021.

Preparation Batch 160-525828:
The carrier recovery is outside acceptance limit for the laboratory control sample (LCS). The LCS spike recoveries were within control limits, which demonstrates acceptable sample preparation and instrument performance. Therefore, this was an apparent anomaly in the sample preparation, isolated to the LCS, which is not indicative of the entire batch: (LCS 160-525828/2-A).

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

TRITIUM

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/14/2021 and 09/19/2021 and analyzed on 09/17/2021 and 09/21/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/23/2021 and 08/27/2021, prepared on 09/05/2021, 09/07/2021 and 09/11/2021 and analyzed on 09/14/2021, 09/20/2021, 09/21/2021 and 09/22/2021.
limit for the duplicate of sample FSS-097-081921DU (160-43157-4).

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

Job ID: 160-43157-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/23/2021 and 08/27/2021, prepared on 09/05/2021, 09/07/2021 and 09/12/2021 and analyzed on 09/14/2021, 09/20/2021, 09/21/2021 and 09/22/2021.

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

CARBON-14 BY LSC

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/22/2021 and 09/23/2021 and analyzed on 09/23/2021 and 09/27/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/23/2021 and 08/25/2021, prepared on 08/26/2021 and 08/27/2021 and analyzed on 09/21/2021, 09/22/2021 and 09/23/2021.

Preparation Batch 160-524257:
For samples FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23), FSS-114-082021 (160-43157-24), (LCS 160-524257/2-A), (MB 160-524257/1-A), and (160-43157-D-24-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212

Job ID: 160-43157-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-524480:
The MB z-score for Pb-214 does not meet QC criteria. T his appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-524480/1-A).

For samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), (LCS 160-524480/2-A), (MB 160-524480/1-A), and (160-43157-D-12-E DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Job ID: 160-43157-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

NICKEL 59/63

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/23/2021 and 08/27/2021, prepared on 09/16/2021 and analyzed on 09/22/2021, 09/23/2021 and 09/24/2021.

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

PLUTONIUM 241

Samples FSS-094-081921 (160-43157-1), FSS-095-081921 (160-43157-2), FSS-096-081921 (160-43157-3), FSS-097-081921 (160-43157-4), FSS-297-081921 (160-43157-5), FSS-098-082021 (160-43157-6), FSS-298-082021 (160-43157-7), FSS-099-082021 (160-43157-8), FSS-299-082021 (160-43157-9), FSS-100-082021 (160-43157-10), FSS-101-082021 (160-43157-11), FSS-102-082021 (160-43157-12), FSS-103-082021 (160-43157-13), FSS-104-082021 (160-43157-14), FSS-105-082021 (160-43157-15), FSS-106-082021 (160-43157-16), FSS-107-082021 (160-43157-17), FSS-108-082021 (160-43157-18), FSS-109-082021 (160-43157-19), FSS-110-082021 (160-43157-20), FSS-111-082021 (160-43157-21), FSS-112-082021 (160-43157-22), FSS-113-082021 (160-43157-23) and FSS-114-082021 (160-43157-24) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/05/2021, 09/07/2021 and 09/12/2021 and analyzed on 09/25/2021, 09/27/2021 and 09/29/2021.

Preparation Batch 160-525621:
The Laboratory Control Sample (LCS) recovered at 129% for Pu-241. The samples had activity less than the MDC and requested limit; therefore, the results were reported.

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

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13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-20-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-094-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 0"-6"
FSS-095-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 6"-12"
FSS-096-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 18"-24"
FSS-097-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 0"-6"
FSS-297-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 0"-6" Dup
FSS-098-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 6"-12"
FSS-298-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 6"-12" Dup
FSS-099-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 18"-24"
FSS-299-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 18"-24" Dup
FSS-100-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 0"-6"
FSS-101-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 6"-12"
FSS-102-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-20-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: ETA STL	Date/Time: 8/21/21 0842
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-20-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-103-082021	20-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS004 0"-6"
FSS-104-082021	20-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS004 6"-12"
FSS-105-082021	20-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS004 18"-24"
FSS-106-082021	20-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS003 0"-6"
FSS-107-082021	20-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS003 6"-12"
FSS-108-082021	20-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS003 18"-24"
FSS-109-082021	20-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS002 0"-6"
FSS-110-082021	20-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS002 6"-12"
FSS-111-082021	20-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS002 18"-24"
FSS-112-082021	20-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS001 0"-6"
FSS-113-082021	20-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS001 6"-12"
FSS-114-082021	20-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS001 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____	
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-20-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: EIA STL	Date/Time: 8/21/21 0842
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-20-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: J. Golliher
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-094-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 0"-6"
FSS-095-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 6"-12"
FSS-096-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS007 18"-24"
FSS-097-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 0"-6"
FSS-297-081921	19-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 0"-6" Dup
FSS-098-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 6"-12"
FSS-298-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 6"-12" Dup
FSS-099-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 18"-24"
FSS-299-082021	20-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS006 18"-24" Dup
FSS-100-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 0"-6"
FSS-101-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 6"-12"
FSS-102-082021	20-Aug	8:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS005 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-20-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time: 8/25/21 08:33
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-47... Page 1 of 1 ...Chain of Custody

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 280-585185.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/25/2021			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #			
Email:	WO #			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	GA_01_R_Ra/Dry_Grind (MOD) Custom per COC (NORM type list)	GA_01_R_Ra/Fill_Geo_21 (MOD) Custom per COC (NORM type list)	905_Sr90/Dry_Grind Strontium-90 (GFPC)	905_Sr90/DPS_7 Strontium-90 (GFPC)	A01R_Pu/Dry_Grind Plutonium-238 and 239/240 (Alpha Spectro	A01R_Pu/ExtChrom_Actin Plutonium-238 and 239/240 (Alpha Spectro	LSC_Pu241/Leach_Precip (MOD) Copy Analytes	A01R_U/Dry_Grind Standard Target List	A01R_U/ExtChrom_Actin Standard Target List	906.0/LSC_Dist_Susp Tritium (LSC)	C_01_1/LSC_Dist_Susp	LSC_Ni/Dry_Grind Nickel-63 (LSC)	LSC_Ni/Ext_Chrom_LSC Nickel-63 (LSC)	Total Number of containers	Special Instructions/Note:
			Preservation Code:																			
FSS-103-082021 (160-43157-13)	8/20/21	09:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-104-082021 (160-43157-14)	8/20/21	09:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-105-082021 (160-43157-15)	8/20/21	09:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-106-082021 (160-43157-16)	8/20/21	09:15 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-107-082021 (160-43157-17)	8/20/21	09:15 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-108-082021 (160-43157-18)	8/20/21	09:15 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-109-082021 (160-43157-19)	8/20/21	09:30 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-110-082021 (160-43157-20)	8/20/21	09:30 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-111-082021 (160-43157-21)	8/20/21	09:30 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		9/16/21 1350		FE		
2	FE			Micha Koninginger	SEP 17 2021 09:25 EDT	
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 280-585185.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/25/2021			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	ICP_Carriers/ (MOD) Local Method	ICP_Native/Dry_Grind (MOD) Local Method	ICP_Native/ICP_Native_Prep (MOD) Local Method	RAD_SCREEN/RAD_SCREEN_PREP Radiological Screen	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
FSS-103-082021 (160-43157-13)	8/20/21	09:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-104-082021 (160-43157-14)	8/20/21	09:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-105-082021 (160-43157-15)	8/20/21	09:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-106-082021 (160-43157-16)	8/20/21	09:15 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-107-082021 (160-43157-17)	8/20/21	09:15 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-108-082021 (160-43157-18)	8/20/21	09:15 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-109-082021 (160-43157-19)	8/20/21	09:30 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-110-082021 (160-43157-20)	8/20/21	09:30 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-111-082021 (160-43157-21)	8/20/21	09:30 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by:	Date/Time: 9/16/21 1350	Company	Received by: FE	Date/Time:	Company
Relinquished by: FE	Date/Time:	Company	Received by: Micha Kominkiewicz	Date/Time: SEP 17 2021 09:25 EDA SL	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 280-585185.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/25/2021			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	GA_01_R_Ra/Dry_Grind (MOD) Custom per COC (NORM type list)	GA_01_R_Ra/Fill_Geo_21 (MOD) Custom per COC (NORM type list)	905_Sr90/Dry_Grind Strontium-90 (GFPC)	905_Sr90/DPS_7 Strontium-90 (GFPC)	A01R_Pu/Dry_Grind Plutonium-238 and 239/240 (Alpha Spectro	A01R_Pu/ExtChrom_Actin Plutonium-238 and 239/240 (Alpha Spectro	LSC_Pu241/Leach_Precip (MOD) Copy Analytes	A01R_U/Dry_Grind Standard Target List	A01R_U/ExtChrom_Actin Standard Target List	906.0/LSC_Dist_Susp Tritium (LSC)	C_01_1/LSC_Dist_Susp	LSC_Ni/Dry_Grind Nickel-63 (LSC)	LSC_Ni/Ext_Chrom_LSC Nickel-63 (LSC)	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
FSS-112-082021 (160-43157-22)	8/20/21	10:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-113-082021 (160-43157-23)	8/20/21	10:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-114-082021 (160-43157-24)	8/20/21	10:00 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/16/21 1350	CHEM	FE		
Relinquished by: FE	Date/Time:	Company	Received by: Micha Kominkiewicz	Date/Time: SEP 17 2021 09:25	Company ETA SIL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 280-585185.4
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/25/2021			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	ICP_Carriers/ (MOD) Local Method	ICP_Native/Dry_Grind (MOD) Local Method	ICP_Native/ICP_Native_Prep (MOD) Local Method	RAD_SCREEN/RAD_SCREEN_PREP Radiological Screen	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
FSS-112-082021 (160-43157-22)	8/20/21	10:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-113-082021 (160-43157-23)	8/20/21	10:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3
FSS-114-082021 (160-43157-24)	8/20/21	10:00 Eastern		Solid			X	X	X	X	1	, 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native, 1.96 Sigma, DER<3

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/16/21 1350		FE		
2	FE			Michael Kornmayer	SEP 17 2021 09:25	EFA SRL
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217993.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/20/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002	PO #:			
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/30306 (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code								
FSS-094-081921 (160-43157-1)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-095-081921 (160-43157-2)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-096-081921 (160-43157-3)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-097-081921 (160-43157-4)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-297-081921 (160-43157-5)	8/19/21	13:00 Eastern		Solid			X	X	X	1	
FSS-098-082021 (160-43157-6)	8/20/21	08:45 Eastern		Solid			X	X	X	1	
FSS-298-082021 (160-43157-7)	8/20/21	08:45 Eastern		Solid			X	X	X	1	
FSS-099-082021 (160-43157-8)	8/20/21	08:45 Eastern		Solid			X	X	X	1	
FSS-299-082021 (160-43157-9)	8/20/21	08:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Mitchell Kohnhorst	Date/Time: 8/23/2021 17:00	Company: ETAS	Received by:	Date/Time: 8/25/2021 1420	Company: ETADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2 9 1.2 11 + 1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No. 160-217993.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/20/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-100-082021 (160-43157-10)	8/20/21	08:30 Eastern		Solid			X	X	X	1	
FSS-101-082021 (160-43157-11)	8/20/21	08:30 Eastern		Solid			X	X	X	1	
FSS-102-082021 (160-43157-12)	8/20/21	08:30 Eastern		Solid			X	X	X	1	
FSS-103-082021 (160-43157-13)	8/20/21	09:00 Eastern		Solid			X	X	X	1	
FSS-104-082021 (160-43157-14)	8/20/21	09:00 Eastern		Solid			X	X	X	1	
FSS-105-082021 (160-43157-15)	8/20/21	09:00 Eastern		Solid			X	X	X	1	
FSS-106-082021 (160-43157-16)	8/20/21	09:15 Eastern		Solid			X	X	X	1	
FSS-107-082021 (160-43157-17)	8/20/21	09:15 Eastern		Solid			X	X	X	1	
FSS-108-082021 (160-43157-18)	8/20/21	09:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Michael Cominsky	Date/Time: 8/23/2021 17:00	Company: ETN SR	Received by:	Date/Time: 08/25/2021 1430	Company: EFADEN	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063266-9

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218166.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/21/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-094-081921 (160-43157-1)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-095-081921 (160-43157-2)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-096-081921 (160-43157-3)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-097-081921 (160-43157-4)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-297-081921 (160-43157-5)	8/19/21	13:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-098-082021 (160-43157-6)	8/20/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-298-082021 (160-43157-7)	8/20/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-099-082021 (160-43157-8)	8/20/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-299-082021 (160-43157-9)	8/20/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Konkinyer	AUG 25 2021 17:00	ETA SN	Linda Mauzi	08-26-2021 9:25 Am	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063266-2

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218166.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/21/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-100-082021 (160-43157-10)	8/20/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-101-082021 (160-43157-11)	8/20/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-102-082021 (160-43157-12)	8/20/21	08:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Micha Kominkiewicz	AUG 25 2021 17:00	EMSL	Linda Mauger	08262021 9:25AM	RJLee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOH1063242-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/21/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-103-082021 (160-43157-13)	8/20/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-104-082021 (160-43157-14)	8/20/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-105-082021 (160-43157-15)	8/20/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-106-082021 (160-43157-16)	8/20/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-107-082021 (160-43157-17)	8/20/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-108-082021 (160-43157-18)	8/20/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-109-082021 (160-43157-19)	8/20/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-110-082021 (160-43157-20)	8/20/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-111-082021 (160-43157-21)	8/20/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/23/21 17:00	EA	Linda Mauger	08252021 1:00PM	RJ Lee Group
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

AOT+1063242-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-217994.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43157-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 9/21/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-112-082021 (160-43157-22)	8/20/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-113-082021 (160-43157-23)	8/20/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-114-082021 (160-43157-24)	8/20/21	10:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Konchinsky	8/23/2021 17:00	ETA SRL	Linda Mauger	08252021 1:00pm	RJLeeGroup
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43157-1

Login Number: 43157
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43157-1

Login Number: 43157
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/25/21 08:05 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43157-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Carrier is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Job ID: 160-43157-1
Project/Site: BNL Decommissioning Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43157-1	FSS-094-081921	Solid	08/19/21 13:00	08/21/21 08:42
160-43157-2	FSS-095-081921	Solid	08/19/21 13:00	08/21/21 08:42
160-43157-3	FSS-096-081921	Solid	08/19/21 13:00	08/21/21 08:42
160-43157-4	FSS-097-081921	Solid	08/19/21 13:00	08/21/21 08:42
160-43157-5	FSS-297-081921	Solid	08/19/21 13:00	08/21/21 08:42
160-43157-6	FSS-098-082021	Solid	08/20/21 08:45	08/21/21 08:42
160-43157-7	FSS-298-082021	Solid	08/20/21 08:45	08/21/21 08:42
160-43157-8	FSS-099-082021	Solid	08/20/21 08:45	08/21/21 08:42
160-43157-9	FSS-299-082021	Solid	08/20/21 08:45	08/21/21 08:42
160-43157-10	FSS-100-082021	Solid	08/20/21 08:30	08/21/21 08:42
160-43157-11	FSS-101-082021	Solid	08/20/21 08:30	08/21/21 08:42
160-43157-12	FSS-102-082021	Solid	08/20/21 08:30	08/21/21 08:42
160-43157-13	FSS-103-082021	Solid	08/20/21 09:00	08/21/21 08:42
160-43157-14	FSS-104-082021	Solid	08/20/21 09:00	08/21/21 08:42
160-43157-15	FSS-105-082021	Solid	08/20/21 09:00	08/21/21 08:42
160-43157-16	FSS-106-082021	Solid	08/20/21 09:15	08/21/21 08:42
160-43157-17	FSS-107-082021	Solid	08/20/21 09:15	08/21/21 08:42
160-43157-18	FSS-108-082021	Solid	08/20/21 09:15	08/21/21 08:42
160-43157-19	FSS-109-082021	Solid	08/20/21 09:30	08/21/21 08:42
160-43157-20	FSS-110-082021	Solid	08/20/21 09:30	08/21/21 08:42
160-43157-21	FSS-111-082021	Solid	08/20/21 09:30	08/21/21 08:42
160-43157-22	FSS-112-082021	Solid	08/20/21 10:00	08/21/21 08:42
160-43157-23	FSS-113-082021	Solid	08/20/21 10:00	08/21/21 08:42
160-43157-24	FSS-114-082021	Solid	08/20/21 10:00	08/21/21 08:42

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Client Sample ID: FSS-094-081921

Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0253	U	0.159	0.159	3.00	0.294	pCi/g	09/08/21 10:20	10/01/21 14:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.4*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.146	U	0.216	0.216	1.00	0.367	pCi/g	09/14/21 15:23	09/17/21 13:13	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0200	U	0.0367	0.0367	1.00	0.0699	pCi/g	09/05/21 18:15	09/14/21 17:39	1
Plutonium-239/240	0.00667	U	0.0180	0.0180	1.00	0.0430	pCi/g	09/05/21 18:15	09/14/21 17:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.5*		*30 - 110*	*09/05/21 18:15*	*09/14/21 17:39*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.128**		0.0689	0.0697	1.00	0.0619	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0271	U	0.0375	0.0376	1.00	0.0607	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.237**		0.0904	0.0925	1.00	0.0537	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.8*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0470	U	0.730	0.730	5.00	1.31	pCi/g	09/22/21 09:02	09/23/21 06:38	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.437**		0.127	0.135		0.237	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Bismuth-212	0.420	U	0.791	0.792		1.36	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Bismuth-214	**0.355**		0.0921	0.0990		0.0717	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Lead-212	**0.339**		0.0904	0.100		0.0958	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Lead-214	**0.342**		0.0787	0.0861		0.0422	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Potassium-40	**4.54**		0.940	1.04		0.696	pCi/g	08/27/21 16:29	09/21/21 23:23	1

Client Sample ID: FSS-094-081921

Lab Sample ID: 160-43157-1

Date Collected: 08/19/21 13:00

Matrix: Solid

Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.355**		0.0921	0.0990	1.00	0.0717	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Thorium-232	**0.437**		0.127	0.135		0.237	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Americium-241	0.0369	U	0.119	0.119		0.165	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Cesium-137	0.0159	U	0.0400	0.0401		0.0714	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Cobalt-60	-0.0327	U	0.0663	0.0663		0.0964	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Europium-152	0.0355	U	0.0709	0.0710		0.122	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Europium-154	0.0588	U	0.0880	0.0882		0.0992	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Europium-155	-0.0699	U	0.159	0.159		0.271	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Sodium-22	-0.00978	U	0.0411	0.0411		0.0771	pCi/g	08/27/21 16:29	09/21/21 23:23	1
Zinc-65	0.00000000712	U	0.122	0.122		0.226	pCi/g	08/27/21 16:29	09/21/21 23:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0506	U	0.873	0.873	5.00	1.52	pCi/g	09/16/21 12:04	09/22/21 22:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*90.0*		*40 - 110*	*09/16/21 12:04*	*09/22/21 22:46*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.888	U	1.10	1.11	5.00	1.86	pCi/g	09/05/21 20:20	09/25/21 13:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.5*		*30 - 110*	*09/05/21 20:20*	*09/25/21 13:07*	*1*

Client Sample ID: FSS-094-081921

Lab Sample ID: 160-43157-1

Date Collected: 08/19/21 13:00

Matrix: Solid

Date Received: 08/21/21 08:42

Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.4**		0.30	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 03:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/15/21 15:00	09/15/21 18:06	1

Client Sample ID: FSS-095-081921

Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-2

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0484	U	0.135	0.135	3.00	0.242	pCi/g	09/08/21 10:20	10/01/21 14:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.1*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*
Y Carrier	*96.8*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0993	U	0.214	0.215	1.00	0.374	pCi/g	09/14/21 15:23	09/17/21 13:35	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0136	U	0.0133	0.0134	1.00	0.0910	pCi/g	09/05/21 18:15	09/14/21 23:37	1
Plutonium-239/240	-0.00341	U	0.00668	0.00669	1.00	0.0660	pCi/g	09/05/21 18:15	09/14/21 23:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.8*		*30 - 110*	*09/05/21 18:15*	*09/14/21 23:37*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0463	U	0.0823	0.0824	1.00	0.151	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	-0.0154	U	0.0151	0.0151	1.00	0.103	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.120**		0.0766	0.0772	1.00	0.0596	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*56.0*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.223	U	0.768	0.768	5.00	1.39	pCi/g	09/22/21 09:02	09/23/21 07:46	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.478**		0.199	0.205		0.365	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Bismuth-212	0.246	U	0.442	0.443		0.780	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Bismuth-214	**0.404**		0.124	0.131		0.115	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Lead-212	**0.380**		0.0876	0.0958		0.0924	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Lead-214	**0.358**		0.106	0.112		0.131	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Potassium-40	**4.52**		1.16	1.24		0.769	pCi/g	08/27/21 16:29	09/21/21 23:22	1

Client Sample ID: FSS-095-081921

Lab Sample ID: 160-43157-2

Date Collected: 08/19/21 13:00

Matrix: Solid

Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.404**		0.124	0.131	1.00	0.115	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Thorium-232	**0.478**		0.199	0.205		0.365	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Americium-241	-0.0697	U	0.179	0.179		0.306	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Cesium-137	-0.0439	U	0.0708	0.0710		0.122	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Cobalt-60	-0.0342	U	0.0877	0.0878		0.0994	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-152	0.00000803	U	0.0000150	0.0000150		0.209	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-154	0.0925	U	0.128	0.128		0.143	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-155	0.0937	U	0.323	0.323		0.552	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Sodium-22	-0.00174	U	0.0491	0.0491		0.0961	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Zinc-65	0.000	U	0.0183	0.0183		0.327	pCi/g	08/27/21 16:29	09/21/21 23:22	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.302	U	0.921	0.921	5.00	1.64	pCi/g	09/16/21 12:04	09/22/21 23:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.2*		*40 - 110*	*09/16/21 12:04*	*09/22/21 23:52*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.39	U	1.65	1.66	5.00	2.78	pCi/g	09/05/21 20:20	09/25/21 14:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*51.8*		*30 - 110*	*09/05/21 20:20*	*09/25/21 14:13*	*1*

Client Sample ID: FSS-095-081921

Lab Sample ID: 160-43157-2

Date Collected: 08/19/21 13:00

Matrix: Solid

Date Received: 08/21/21 08:42

Percent Solids: 95.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**12**		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/16/21 03:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	21	6.7	ug/Kg	☼	09/15/21 15:00	09/15/21 18:18	1

Client Sample ID: FSS-096-081921

Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-3

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.106	U	0.164	0.164	3.00	0.282	pCi/g	09/08/21 10:20	10/01/21 14:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.6*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:04*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0380	U	0.217	0.217	1.00	0.393	pCi/g	09/14/21 15:23	09/17/21 13:58	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0253	U	0.0465	0.0466	1.00	0.0886	pCi/g	09/05/21 18:15	09/14/21 23:37	1
Plutonium-239/240	0.00846	U	0.0228	0.0228	1.00	0.0546	pCi/g	09/05/21 18:15	09/14/21 23:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.1*		*30 - 110*	*09/05/21 18:15*	*09/14/21 23:37*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.230**		0.110	0.112	1.00	0.0854	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-235/236	0.0119	U	0.0474	0.0474	1.00	0.113	pCi/g	09/05/21 20:32	09/14/21 17:54	1
Uranium-238	**0.255**		0.115	0.117	1.00	0.0852	pCi/g	09/05/21 20:32	09/14/21 17:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*53.8*		*30 - 110*	*09/05/21 20:32*	*09/14/21 17:54*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0686	U	0.798	0.798	5.00	1.43	pCi/g	09/22/21 09:02	09/23/21 08:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.487**		0.158	0.165		0.121	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Bismuth-212	0.290	U	0.463	0.464		0.797	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Bismuth-214	**0.231**		0.0994	0.102		0.0993	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Lead-212	**0.378**		0.0656	0.0813		0.0578	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Lead-214	**0.348**		0.0854	0.0924		0.0734	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Potassium-40	**4.64**		0.804	0.929		0.267	pCi/g	08/27/21 16:29	09/21/21 22:38	1

Client Sample ID: FSS-096-081921

Lab Sample ID: 160-43157-3
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.231**		0.0994	0.102	1.00	0.0993	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Thorium-232	**0.487**		0.158	0.165		0.121	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Americium-241	0.0145	U	0.111	0.111		0.193	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Cesium-137	0.0180	U	0.0335	0.0335		0.0585	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Cobalt-60	-0.00120	U	0.0557	0.0557		0.0661	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-152	0.0871	U	0.127	0.128		0.129	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-154	0.0381	U	0.0704	0.0705		0.0880	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-155	0.0516	U	0.111	0.111		0.281	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Sodium-22	0.00231	U	0.0328	0.0328		0.0638	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Zinc-65	-0.0815	U	0.138	0.138		0.236	pCi/g	08/27/21 16:29	09/21/21 22:38	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.237	U	0.780	0.780	5.00	1.39	pCi/g	09/16/21 12:04	09/23/21 00:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*96.4*		*40 - 110*	*09/16/21 12:04*	*09/23/21 00:58*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.08	U	1.44	1.44	5.00	2.44	pCi/g	09/05/21 20:20	09/25/21 15:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*62.1*		*30 - 110*	*09/05/21 20:20*	*09/25/21 15:20*	*1*

Client Sample ID: FSS-096-081921

Lab Sample ID: 160-43157-3
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.1**		0.29	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 03:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/15/21 15:00	09/15/21 18:21	1

Client Sample ID: FSS-097-081921

Lab Sample ID: 160-43157-4
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.173	U	0.141	0.142	3.00	0.289	pCi/g	09/08/21 10:20	10/01/21 14:09	1

Client Sample ID: FSS-097-081921

Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-4

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.4		40 - 110	09/08/21 10:20	10/01/21 14:09	1
Y Carrier	98.7		40 - 110	09/08/21 10:20	10/01/21 14:09	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00714	U	0.203	0.203	1.00	0.372	pCi/g	09/14/21 15:23	09/17/21 14:21	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00797	U	0.0191	0.0191	1.00	0.0653	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00199	U	0.00391	0.00391	1.00	0.0386	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	101		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.285**		0.0928	0.0957	1.00	0.0585	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.00695	U	0.0187	0.0187	1.00	0.0448	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.282**		0.0912	0.0941	1.00	0.0496	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	94.1		30 - 110	09/07/21 14:40	09/20/21 14:32	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.517	U	0.790	0.792	5.00	1.47	pCi/g	09/22/21 09:02	09/23/21 08:31	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.554**		0.124	0.136		0.0668	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Bismuth-212	0.461	U	0.798	0.799		1.36	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Bismuth-214	**0.467**		0.119	0.128		0.103	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Lead-212	**0.432**		0.0749	0.0928		0.0773	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Lead-214	**0.562**		0.0898	0.106		0.0915	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Potassium-40	**9.99**		1.21	1.57		0.575	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Radium-226	**0.467**		0.119	0.128	1.00	0.103	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Thorium-232	**0.554**		0.124	0.136		0.0668	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Americium-241	0.0358	U	0.118	0.119		0.204	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Cesium-137	0.0224	U	0.0415	0.0415		0.0719	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Cobalt-60	0.00592	U	0.0557	0.0557		0.0653	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Europium-152	0.109	U	0.175	0.175		0.125	pCi/g	08/27/21 16:29	09/21/21 21:59	1

Client Sample ID: FSS-097-081921

Lab Sample ID: 160-43157-4
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0471	U	0.0795	0.0796		0.0916	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Europium-155	-0.0745	U	0.139	0.139		0.428	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Sodium-22	0.0239	U	0.0287	0.0288		0.0473	pCi/g	08/27/21 16:29	09/21/21 21:59	1
Zinc-65	-0.0803	U	0.140	0.140		0.241	pCi/g	08/27/21 16:29	09/21/21 21:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0442	U	0.877	0.877	5.00	1.54	pCi/g	09/16/21 12:04	09/23/21 02:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*91.6*		*40 - 110*	*09/16/21 12:04*	*09/23/21 02:04*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.119	U	1.26	1.26	5.00	2.25	pCi/g	09/07/21 14:41	09/29/21 00:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/07/21 14:41*	*09/29/21 00:19*	*1*

Client Sample ID: FSS-097-081921

Lab Sample ID: 160-43157-4
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 97.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	28		0.29	0.018	mg/Kg	☼	09/15/21 07:52	09/16/21 03:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	21		19	6.1	ug/Kg	☼	09/15/21 15:00	09/15/21 18:23	1

Client Sample ID: FSS-297-081921

Lab Sample ID: 160-43157-5
Date Collected: 08/19/21 13:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0244	U	0.128	0.128	3.00	0.243	pCi/g	09/08/21 10:20	10/01/21 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.3*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:09*	*1*
Y Carrier	*95.0*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:09*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Client Sample ID: FSS-297-081921

Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-5

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00790	U	0.205	0.205	1.00	0.376	pCi/g	09/14/21 15:23	09/17/21 14:43	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0156	U	0.0266	0.0266	1.00	0.0810	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00783	U	0.0255	0.0255	1.00	0.0734	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*102*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.161**		0.0917	0.0926	1.00	0.122	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	-0.00752	U	0.0322	0.0322	1.00	0.0912	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.197**		0.0828	0.0844	1.00	0.0709	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.9*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.330	U	0.679	0.680	5.00	1.25	pCi/g	09/22/21 09:02	09/23/21 08:54	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.485**		0.164	0.171		0.228	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Bismuth-212	-0.287	U	0.750	0.751		1.32	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Bismuth-214	**0.513**		0.130	0.140		0.107	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Lead-212	**0.465**		0.0958	0.112		0.105	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Lead-214	**0.382**		0.117	0.123		0.150	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Potassium-40	**4.36**		0.993	1.09		0.790	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Radium-226	**0.513**		0.130	0.140	1.00	0.107	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Thorium-232	**0.485**		0.164	0.171		0.228	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Americium-241	0.0572	U	0.129	0.129		0.178	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Cesium-137	**0.147**		0.0651	0.0668		0.0654	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Cobalt-60	**0.0416**		0.0300	0.0302		0.0363	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Europium-152	0.0849	U	0.137	0.137		0.155	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Europium-154	0.0514	U	0.0857	0.0859		0.124	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Europium-155	0.0334	U	0.102	0.102		0.368	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Sodium-22	-0.0190	U	0.0575	0.0575		0.104	pCi/g	08/27/21 16:29	09/21/21 21:55	1
Zinc-65	0.000	U	0.0525	0.0525		0.349	pCi/g	08/27/21 16:29	09/21/21 21:55	1

Client Sample ID: FSS-297-081921

Lab Sample ID: 160-43157-5
Matrix: Solid
Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.173	U	0.845	0.846	5.00	1.50	pCi/g	09/16/21 12:04	09/23/21 03:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*95.9*		*40 - 110*	*09/16/21 12:04*	*09/23/21 03:10*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.126	U	1.20	1.20	5.00	2.16	pCi/g	09/07/21 14:41	09/29/21 01:26	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*102*		*30 - 110*	*09/07/21 14:41*	*09/29/21 01:26*	*1*

Client Sample ID: FSS-297-081921

Lab Sample ID: 160-43157-5
Matrix: Solid
Date Collected: 08/19/21 13:00
Date Received: 08/21/21 08:42
Percent Solids: 95.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	51	J1	0.24	0.014	mg/Kg	☼	09/15/21 07:52	09/15/21 19:49	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	32		19	6.1	ug/Kg	☼	09/15/21 15:00	09/15/21 18:26	1

Client Sample ID: FSS-098-082021

Lab Sample ID: 160-43157-6
Matrix: Solid
Date Collected: 08/20/21 08:45
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.192	U	0.167	0.167	3.00	0.272	pCi/g	09/08/21 10:20	10/01/21 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.8*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:09*	*1*
Y Carrier	*96.8*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:09*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0455	U	0.210	0.210	1.00	0.375	pCi/g	09/14/21 15:23	09/17/21 15:06	1

Client Sample ID: FSS-098-082021

Date Collected: 08/20/21 08:45
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-6

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00370	U	0.00513	0.00514	1.00	0.0415	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00185	U	0.00363	0.00364	1.00	0.0359	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*100*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.228**		0.0861	0.0882	1.00	0.0464	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0180	U	0.0290	0.0291	1.00	0.0499	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.279**		0.0946	0.0974	1.00	0.0400	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*86.3*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.571	U	0.827	0.829	5.00	1.41	pCi/g	09/22/21 09:02	09/23/21 09:16	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.436**		0.110	0.118		0.160	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Bismuth-212	-0.0396	U	0.740	0.740		1.32	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Bismuth-214	0.0658	U	0.107	0.107		0.214	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Lead-212	**0.434**		0.0707	0.0895		0.0627	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Lead-214	**0.342**		0.0784	0.0858		0.105	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Potassium-40	**3.92**		0.739	0.837		0.268	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Radium-226	0.0658	U	0.107	0.107	1.00	0.214	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Thorium-232	**0.436**		0.110	0.118		0.160	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Americium-241	0.0568	U	0.124	0.125		0.213	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Cesium-137	**0.118**		0.0333	0.0354		0.0181	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Cobalt-60	-0.00466	U	0.0165	0.0165		0.0789	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Europium-152	0.0224	U	0.0935	0.0935		0.152	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Europium-154	0.0561	U	0.0680	0.0682		0.0822	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Europium-155	-0.00520	U	0.0114	0.0114		0.387	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Sodium-22	-0.0658	U	0.0675	0.0678		0.111	pCi/g	08/27/21 16:29	09/21/21 23:20	1
Zinc-65	0.000	U	0.0453	0.0453		0.203	pCi/g	08/27/21 16:29	09/21/21 23:20	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.265	U	1.88	1.89	5.00	3.36	pCi/g	09/16/21 12:04	09/23/21 04:17	1

Client Sample ID: FSS-098-082021

Lab Sample ID: 160-43157-6
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	43.9		40 - 110	09/16/21 12:04	09/23/21 04:17	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.184	U	1.32	1.32	5.00	2.35	pCi/g	09/07/21 14:41	09/29/21 01:59	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	100		30 - 110	09/07/21 14:41	09/29/21 01:59	1

Client Sample ID: FSS-098-082021

Lab Sample ID: 160-43157-6
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 80.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	44		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/15/21 20:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	82		22	7.1	ug/Kg	☼	09/15/21 15:00	09/15/21 18:28	1

Client Sample ID: FSS-298-082021

Lab Sample ID: 160-43157-7
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.144	U	0.149	0.150	3.00	0.248	pCi/g	09/08/21 10:20	10/01/21 14:09	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.0		40 - 110	09/08/21 10:20	10/01/21 14:09	1
Y Carrier	98.3		40 - 110	09/08/21 10:20	10/01/21 14:09	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00120	U	0.202	0.202	1.00	0.367	pCi/g	09/14/21 15:23	09/17/21 15:29	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0209	U	0.0289	0.0290	1.00	0.0468	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00836	U	0.00819	0.00822	1.00	0.0558	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.9		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Client Sample ID: FSS-298-082021

Date Collected: 08/20/21 08:45
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-7

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.331**		0.110	0.113	1.00	0.0823	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0266	U	0.0368	0.0369	1.00	0.0595	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.309**		0.104	0.107	1.00	0.0671	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.0*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.327	U	0.680	0.681	5.00	1.25	pCi/g	09/22/21 09:02	09/23/21 09:39	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.511**		0.0939	0.107		0.0661	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Bismuth-212	0.000	U	0.409	0.409		0.953	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Bismuth-214	**0.276**		0.0960	0.100		0.0969	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Lead-212	**0.383**		0.0682	0.0837		0.0671	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Lead-214	**0.335**		0.0697	0.0776		0.0857	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Potassium-40	**3.96**		0.734	0.835		0.261	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Radium-226	**0.276**		0.0960	0.100	1.00	0.0969	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Thorium-232	**0.511**		0.0939	0.107		0.0661	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Americium-241	0.0681	U	0.103	0.103		0.175	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Cesium-137	0.0345	U	0.0602	0.0603		0.0709	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Cobalt-60	-0.0479	U	0.0808	0.0810		0.0873	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Europium-152	0.154	U	0.0633	0.0652		0.308	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Europium-154	0.0484	U	0.0760	0.0762		0.0885	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Europium-155	0.000	U	0.0639	0.0639		0.446	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Sodium-22	-0.0214	U	0.0425	0.0425		0.0749	pCi/g	08/27/21 16:29	09/21/21 21:56	1
Zinc-65	0.000	U	0.0167	0.0167		0.159	pCi/g	08/27/21 16:29	09/21/21 21:56	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.797	U	0.925	0.929	5.00	1.59	pCi/g	09/16/21 12:04	09/23/21 05:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*92.4*		*40 - 110*	*09/16/21 12:04*	*09/23/21 05:23*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.326	U	1.40	1.40	5.00	2.48	pCi/g	09/07/21 14:41	09/29/21 02:33	1

Client Sample ID: FSS-298-082021

Lab Sample ID: 160-43157-7
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.9		30 - 110	09/07/21 14:41	09/29/21 02:33	1

Client Sample ID: FSS-298-082021

Lab Sample ID: 160-43157-7
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 95.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**23**		0.24	0.015	mg/Kg	☼	09/15/21 07:52	09/15/21 20:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**14**	**J**	19	6.1	ug/Kg	☼	09/15/21 15:00	09/16/21 11:24	1

Client Sample ID: FSS-099-082021

Lab Sample ID: 160-43157-8
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.112	U	0.135	0.135	3.00	0.272	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.8		40 - 110	09/08/21 10:20	10/01/21 14:10	1
Y Carrier	98.3		40 - 110	09/08/21 10:20	10/01/21 14:10	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0653	U	0.195	0.195	1.00	0.364	pCi/g	09/14/21 15:23	09/17/21 15:52	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00189	U	0.0170	0.0170	1.00	0.0538	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00758	U	0.0149	0.0149	1.00	0.0227	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	96.4		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.225**		0.0860	0.0880	1.00	0.0511	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.000	U	0.00504	0.00504	1.00	0.0309	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.295**		0.0971	0.100	1.00	0.0399	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Client Sample ID: FSS-099-082021

Date Collected: 08/20/21 08:45
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-8

Matrix: Solid

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.3*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.688	U	0.736	0.740	5.00	1.39	pCi/g	09/22/21 09:02	09/23/21 10:02	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.472**		0.232	0.237		0.228	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Bismuth-212	0.000	U	0.522	0.522		1.28	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Bismuth-214	**0.466**		0.125	0.134		0.104	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Lead-212	**0.492**		0.0973	0.116		0.105	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Lead-214	**0.413**		0.0937	0.103		0.0971	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Potassium-40	**8.19**		1.31	1.55		0.791	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Radium-226	**0.466**		0.125	0.134	1.00	0.104	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Thorium-232	**0.472**		0.232	0.237		0.228	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Americium-241	-0.00127	U	0.148	0.148		0.207	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Cesium-137	**0.146**		0.0437	0.0461		0.0250	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Cobalt-60	-0.0290	U	0.0377	0.0378		0.137	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Europium-152	0.0924	U	0.148	0.148		0.177	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Europium-154	0.0162	U	0.0234	0.0234		0.135	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Europium-155	0.000	U	0.0940	0.0940		0.326	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Sodium-22	0.0413	U	0.0523	0.0524		0.0876	pCi/g	08/27/21 16:29	09/21/21 22:39	1
Zinc-65	0.000	U	0.0166	0.0166		0.221	pCi/g	08/27/21 16:29	09/21/21 22:39	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.385	U	1.02	1.02	5.00	1.76	pCi/g	09/16/21 12:04	09/23/21 06:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*78.4*		*40 - 110*	*09/16/21 12:04*	*09/23/21 06:29*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.172	U	1.55	1.55	5.00	2.88	pCi/g	09/07/21 14:41	09/29/21 03:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*96.4*		*30 - 110*	*09/07/21 14:41*	*09/29/21 03:06*	*1*

Client Sample ID: FSS-099-082021

Lab Sample ID: 160-43157-8
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 82.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	38		0.26	0.016	mg/Kg	☼	09/15/21 07:52	09/15/21 20:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	91		23	7.3	ug/Kg	☼	09/15/21 15:00	09/16/21 11:27	1

Client Sample ID: FSS-299-082021

Lab Sample ID: 160-43157-9
Date Collected: 08/20/21 08:45
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0287	U	0.179	0.179	3.00	0.330	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.6*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0138	U	0.207	0.207	1.00	0.382	pCi/g	09/14/21 15:23	09/17/21 16:15	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0204	U	0.0380	0.0381	1.00	0.0721	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00409	U	0.0247	0.0247	1.00	0.0614	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.9*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.345		0.103	0.107	1.00	0.0524	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0171	U	0.0275	0.0275	1.00	0.0472	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	0.358		0.104	0.108	1.00	0.0379	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*90.0*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.114	U	0.813	0.813	5.00	1.46	pCi/g	09/22/21 09:02	09/23/21 10:24	1

Client Sample ID: FSS-299-082021

Lab Sample ID: 160-43157-9

Date Collected: 08/20/21 08:45

Matrix: Solid

Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.647**		0.162	0.174		0.133	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Bismuth-212	0.292	U	0.525	0.525		0.916	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Bismuth-214	**0.434**		0.126	0.134		0.103	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Lead-212	**0.506**		0.0953	0.115		0.0973	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Lead-214	**0.491**		0.112	0.122		0.0757	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Potassium-40	**4.27**		0.978	1.07		0.761	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Radium-226	**0.434**		0.126	0.134	1.00	0.103	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Thorium-232	**0.647**		0.162	0.174		0.133	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Americium-241	-0.0740	U	0.202	0.202		0.345	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Cesium-137	**0.124**		0.0470	0.0487		0.0376	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Cobalt-60	-0.0245	U	0.0899	0.0900		0.105	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-152	0.0938	U	0.123	0.124		0.168	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-154	0.0570	U	0.105	0.105		0.124	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Europium-155	0.0288	U	0.0907	0.0908		0.369	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Sodium-22	0.00158	U	0.0432	0.0432		0.0849	pCi/g	08/27/21 16:29	09/21/21 22:38	1
Zinc-65	-0.00470	U	0.105	0.105		0.303	pCi/g	08/27/21 16:29	09/21/21 22:38	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.484	U	0.927	0.928	5.00	1.60	pCi/g	09/16/21 12:04	09/23/21 07:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*88.7*		*40 - 110*	*09/16/21 12:04*	*09/23/21 07:36*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.116	U	1.35	1.35	5.00	2.41	pCi/g	09/07/21 14:41	09/29/21 03:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.9*		*30 - 110*	*09/07/21 14:41*	*09/29/21 03:40*	*1*

Client Sample ID: FSS-299-082021

Lab Sample ID: 160-43157-9

Date Collected: 08/20/21 08:45

Matrix: Solid

Date Received: 08/21/21 08:42

Percent Solids: 80.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**46**		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/15/21 20:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**50**		24	7.8	ug/Kg	☼	09/15/21 15:00	09/16/21 11:29	1

Client Sample ID: FSS-100-082021

Date Collected: 08/20/21 08:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-10

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.109	U	0.190	0.190	3.00	0.328	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.8*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.166	U	0.226	0.227	1.00	0.386	pCi/g	09/14/21 15:23	09/17/21 16:37	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00616	U	0.0435	0.0435	1.00	0.0939	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.0103	U	0.0201	0.0202	1.00	0.0700	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.6*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.246**		0.0941	0.0963	1.00	0.0795	pCi/g	09/07/21 14:40	09/21/21 10:19	1
Uranium-235/236	0.00514	U	0.0214	0.0214	1.00	0.0576	pCi/g	09/07/21 14:40	09/21/21 10:19	1
Uranium-238	**0.216**		0.0862	0.0880	1.00	0.0648	pCi/g	09/07/21 14:40	09/21/21 10:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.8*		*30 - 110*	*09/07/21 14:40*	*09/21/21 10:19*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.705	U	0.749	0.753	5.00	1.42	pCi/g	09/22/21 09:02	09/23/21 10:47	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.471**		0.170	0.177		0.181	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Bismuth-212	0.270	U	0.822	0.822		1.46	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Bismuth-214	**0.374**		0.128	0.134		0.138	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Lead-212	**0.460**		0.0969	0.108		0.105	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Lead-214	**0.402**		0.102	0.110		0.113	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Potassium-40	**4.28**		1.28	1.35		1.01	pCi/g	08/27/21 16:29	09/21/21 22:36	1

Client Sample ID: FSS-100-082021

Lab Sample ID: 160-43157-10
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.374**		0.128	0.134	1.00	0.138	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Thorium-232	**0.471**		0.170	0.177		0.181	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Americium-241	0.0721	U	0.173	0.174		0.297	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Cesium-137	0.0386	U	0.0737	0.0738		0.127	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Cobalt-60	-0.0372	U	0.104	0.104		0.116	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Europium-152	0.0734	U	0.128	0.128		0.205	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Europium-154	0.00892	U	0.0750	0.0750		0.132	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Europium-155	-0.103	U	0.356	0.356		0.608	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Sodium-22	-0.00856	U	0.0363	0.0363		0.0709	pCi/g	08/27/21 16:29	09/21/21 22:36	1
Zinc-65	0.0594	U	0.122	0.122		0.214	pCi/g	08/27/21 16:29	09/21/21 22:36	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.133	U	0.977	0.977	5.00	1.71	pCi/g	09/16/21 12:04	09/23/21 08:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.2*		*40 - 110*	*09/16/21 12:04*	*09/23/21 08:42*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.637	U	1.32	1.32	5.00	2.28	pCi/g	09/07/21 14:41	09/29/21 04:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.6*		*30 - 110*	*09/07/21 14:41*	*09/29/21 04:13*	*1*

Client Sample ID: FSS-100-082021

Lab Sample ID: 160-43157-10
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 90.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**24**		0.30	0.018	mg/Kg	☼	09/15/21 07:52	09/15/21 20:27	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	21	6.8	ug/Kg	☼	09/15/21 15:00	09/16/21 11:32	1

Client Sample ID: FSS-101-082021

Lab Sample ID: 160-43157-11
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0137	U	0.159	0.159	3.00	0.295	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Client Sample ID: FSS-101-082021
Date Collected: 08/20/21 08:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-11
Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.4		40 - 110	09/08/21 10:20	10/01/21 14:10	1
Y Carrier	95.3		40 - 110	09/08/21 10:20	10/01/21 14:10	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.132	U	0.222	0.222	1.00	0.382	pCi/g	09/14/21 15:23	09/17/21 17:00	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0314	U	0.0407	0.0408	1.00	0.0672	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00224	U	0.00439	0.00440	1.00	0.0434	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.5		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.202**		0.0789	0.0807	1.00	0.0620	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0159	U	0.0323	0.0324	1.00	0.0645	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.142**		0.0639	0.0650	1.00	0.0407	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	86.4		30 - 110	09/07/21 14:40	09/20/21 14:32	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0308	U	0.720	0.720	5.00	1.29	pCi/g	09/22/21 09:02	09/23/21 11:10	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.350**		0.214	0.217		0.223	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Bismuth-212	0.000	U	0.440	0.440		0.776	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Bismuth-214	**0.268**		0.105	0.108		0.110	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Lead-212	**0.385**		0.0718	0.0868		0.0736	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Lead-214	**0.240**		0.0843	0.0877		0.105	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Potassium-40	**4.03**		0.821	0.915		0.600	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Radium-226	**0.268**		0.105	0.108	1.00	0.110	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Thorium-232	**0.350**		0.214	0.217		0.223	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Americium-241	0.0509	U	0.116	0.116		0.199	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Cesium-137	0.00420	U	0.0420	0.0420		0.0767	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Cobalt-60	0.0123	U	0.0426	0.0427		0.0511	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Europium-152	0.0641	U	0.131	0.131		0.127	pCi/g	08/27/21 16:29	09/21/21 23:21	1

Client Sample ID: FSS-101-082021

Lab Sample ID: 160-43157-11
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0278	U	0.0450	0.0450		0.0913	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Europium-155	0.0391	U	0.0638	0.0639		0.109	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Sodium-22	-0.00477	U	0.0343	0.0343		0.0658	pCi/g	08/27/21 16:29	09/21/21 23:21	1
Zinc-65	0.000	U	0.0352	0.0352		0.190	pCi/g	08/27/21 16:29	09/21/21 23:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.101	U	0.903	0.903	5.00	1.61	pCi/g	09/16/21 12:04	09/23/21 09:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.1*		*40 - 110*	*09/16/21 12:04*	*09/23/21 09:48*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.537	U	1.39	1.40	5.00	2.43	pCi/g	09/07/21 14:41	09/29/21 04:47	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.5*		*30 - 110*	*09/07/21 14:41*	*09/29/21 04:47*	*1*

Client Sample ID: FSS-101-082021

Lab Sample ID: 160-43157-11
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 80.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.3		0.30	0.018	mg/Kg	☼	09/15/21 07:52	09/15/21 20:31	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	23	7.4	ug/Kg	☼	09/15/21 15:00	09/16/21 11:34	1

Client Sample ID: FSS-102-082021

Lab Sample ID: 160-43157-12
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0967	U	0.147	0.147	3.00	0.286	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.0*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*
Y Carrier	*99.4*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Client Sample ID: FSS-102-082021

Date Collected: 08/20/21 08:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-12

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0212	U	0.207	0.207	1.00	0.372	pCi/g	09/14/21 15:23	09/17/21 17:23	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0100	U	0.00877	0.00881	1.00	0.0569	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00601	U	0.00680	0.00682	1.00	0.0496	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.5*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.210**		0.0907	0.0923	1.00	0.0930	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0177	U	0.0285	0.0286	1.00	0.0490	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.160**		0.0735	0.0747	1.00	0.0578	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*84.1*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.120	U	0.737	0.737	5.00	1.33	pCi/g	09/22/21 09:02	09/23/21 11:32	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.508**		0.176	0.183		0.164	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Bismuth-212	0.469	U	0.814	0.816		1.40	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Bismuth-214	**0.303**		0.121	0.125		0.121	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Lead-212	**0.359**		0.0831	0.0948		0.0903	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Lead-214	**0.443**		0.0915	0.102		0.0363	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Potassium-40	**3.88**		0.948	1.02		0.773	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Radium-226	**0.303**		0.121	0.125	1.00	0.121	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Thorium-232	**0.508**		0.176	0.183		0.164	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Americium-241	0.0583	U	0.180	0.180		0.310	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Cesium-137	-0.0179	U	0.0697	0.0697		0.127	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Cobalt-60	0.0299	U	0.0239	0.0241		0.0367	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-152	-0.00165	U	0.00289	0.00290		0.200	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-154	0.0714	U	0.0884	0.0888		0.127	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Europium-155	0.0265	U	0.0834	0.0835		0.333	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Sodium-22	-0.0240	U	0.0573	0.0574		0.103	pCi/g	08/27/21 16:29	09/21/21 23:22	1
Zinc-65	-0.00477	U	0.121	0.121		0.248	pCi/g	08/27/21 16:29	09/21/21 23:22	1

Client Sample ID: FSS-102-082021

Lab Sample ID: 160-43157-12
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.956	U	1.14	1.14	5.00	1.94	pCi/g	09/16/21 12:04	09/23/21 10:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*76.8*		*40 - 110*	*09/16/21 12:04*	*09/23/21 10:55*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0441	U	1.39	1.39	5.00	2.48	pCi/g	09/07/21 14:41	09/29/21 05:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.5*		*30 - 110*	*09/07/21 14:41*	*09/29/21 05:21*	*1*

Client Sample ID: FSS-102-082021

Lab Sample ID: 160-43157-12
Date Collected: 08/20/21 08:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 94.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.6		0.26	0.016	mg/Kg	☼	09/15/21 07:52	09/15/21 20:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/15/21 15:00	09/16/21 11:37	1

Client Sample ID: FSS-103-082021

Lab Sample ID: 160-43157-13
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.103	U	0.163	0.163	3.00	0.280	pCi/g	09/08/21 10:20	10/01/21 14:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.4*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:10*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.134	U	0.220	0.220	1.00	0.387	pCi/g	09/19/21 15:37	09/21/21 01:41	1

Client Sample ID: FSS-103-082021

Date Collected: 08/20/21 09:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-13

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0201	U	0.0279	0.0279	1.00	0.0450	pCi/g	09/07/21 14:07	09/22/21 10:24	1
Plutonium-239/240	-0.0101	U	0.00882	0.00886	1.00	0.0572	pCi/g	09/07/21 14:07	09/22/21 10:24	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.4*		*30 - 110*	*09/07/21 14:07*	*09/22/21 10:24*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.270**		0.0956	0.0981	1.00	0.0624	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0181	U	0.0291	0.0292	1.00	0.0501	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.255**		0.0925	0.0948	1.00	0.0590	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.3*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.290	U	0.448	0.449	5.00	0.831	pCi/g	09/22/21 10:41	09/23/21 11:55	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.386**		0.114	0.120		0.0631	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Bismuth-212	0.156	U	0.429	0.430		0.763	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Bismuth-214	**0.341**		0.0933	0.0995		0.0818	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Lead-212	**0.471**		0.0693	0.0914		0.0560	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Lead-214	**0.276**		0.0689	0.0744		0.0797	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Potassium-40	**3.69**		0.692	0.784		0.249	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Radium-226	**0.341**		0.0933	0.0995	1.00	0.0818	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Thorium-232	**0.386**		0.114	0.120		0.0631	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Americium-241	-0.0594	U	0.121	0.121		0.158	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Cesium-137	0.0251	U	0.0450	0.0450		0.0776	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Cobalt-60	**0.0369**		0.0218	0.0221		0.0247	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-152	0.145	U	0.0946	0.0958		0.280	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-154	0.0313	U	0.0509	0.0510		0.0788	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-155	0.0622	U	0.166	0.166		0.284	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Sodium-22	0.0231	U	0.0393	0.0393		0.0447	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Zinc-65	0.000	U	0.0159	0.0159		0.176	pCi/g	08/26/21 13:50	09/22/21 15:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.374	U	0.861	0.862	5.00	1.49	pCi/g	09/16/21 12:04	09/23/21 12:01	1

Client Sample ID: FSS-103-082021

Lab Sample ID: 160-43157-13
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	92.4		40 - 110	09/16/21 12:04	09/23/21 12:01	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0318	U	1.54	1.54	5.00	2.78	pCi/g	09/07/21 14:41	09/29/21 05:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	84.4		30 - 110	09/07/21 14:41	09/29/21 05:54	1

Client Sample ID: FSS-103-082021

Lab Sample ID: 160-43157-13
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 78.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	11		0.33	0.020	mg/Kg	☼	09/15/21 07:52	09/15/21 20:38	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	J	22	7.3	ug/Kg	☼	09/15/21 15:00	09/16/21 11:40	1

Client Sample ID: FSS-104-082021

Lab Sample ID: 160-43157-14
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.147	U	0.144	0.145	3.00	0.292	pCi/g	09/08/21 10:20	10/01/21 14:11	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.3		40 - 110	09/08/21 10:20	10/01/21 14:11	1
Y Carrier	99.4		40 - 110	09/08/21 10:20	10/01/21 14:11	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.106	U	0.183	0.183	1.00	0.357	pCi/g	09/19/21 15:37	09/21/21 02:04	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00356	0.00356	1.00	0.0218	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00727	U	0.0142	0.0143	1.00	0.0218	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.2		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Client Sample ID: FSS-104-082021

Date Collected: 08/20/21 09:00
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-14

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.269**		0.0927	0.0953	1.00	0.0566	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	-0.00248	U	0.00485	0.00486	1.00	0.0479	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.195**		0.0800	0.0816	1.00	0.0596	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.3*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.00952	U	0.594	0.594	5.00	1.06	pCi/g	09/22/21 10:41	09/23/21 12:18	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.510**		0.208	0.214		0.193	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Bismuth-212	0.264	U	0.443	0.444		0.770	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Bismuth-214	0.136	U	0.0900	0.0911		0.256	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Lead-212	**0.400**		0.0801	0.0948		0.0811	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Lead-214	**0.392**		0.115	0.122		0.135	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Potassium-40	**3.77**		0.876	0.954		0.688	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Radium-226	0.136	U	0.0900	0.0911	1.00	0.256	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Thorium-232	**0.510**		0.208	0.214		0.193	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Americium-241	0.0486	U	0.133	0.133		0.228	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Cesium-137	**0.0670**		0.0283	0.0291		0.0225	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Cobalt-60	0.00972	U	0.0331	0.0331		0.0597	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-152	0.0519	U	0.148	0.148		0.165	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-154	-0.0381	U	0.0699	0.0700		0.119	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Europium-155	-0.00433	U	0.120	0.120		0.317	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Sodium-22	0.0157	U	0.0318	0.0318		0.0577	pCi/g	08/26/21 13:50	09/22/21 15:03	1
Zinc-65	-0.107	U	0.0844	0.0851		0.315	pCi/g	08/26/21 13:50	09/22/21 15:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.523	U	0.963	0.964	5.00	1.67	pCi/g	09/16/21 12:04	09/23/21 13:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.7*		*40 - 110*	*09/16/21 12:04*	*09/23/21 13:07*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.0190	U	1.38	1.38	5.00	2.48	pCi/g	09/07/21 14:41	09/29/21 06:28	1

Client Sample ID: FSS-104-082021

Lab Sample ID: 160-43157-14
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.2		30 - 110	09/07/21 14:41	09/29/21 06:28	1

Client Sample ID: FSS-104-082021

Lab Sample ID: 160-43157-14
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 81.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.8		0.27	0.017	mg/Kg	☼	09/15/21 07:52	09/15/21 20:42	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	19	J	24	7.8	ug/Kg	☼	09/15/21 15:00	09/16/21 11:42	1

Client Sample ID: FSS-105-082021

Lab Sample ID: 160-43157-15
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0433	U	0.154	0.154	3.00	0.290	pCi/g	09/08/21 10:20	10/01/21 14:11	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.2		40 - 110	09/08/21 10:20	10/01/21 14:11	1
Y Carrier	97.6		40 - 110	09/08/21 10:20	10/01/21 14:11	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0975	U	0.217	0.217	1.00	0.389	pCi/g	09/19/21 15:37	09/21/21 02:26	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00550	U	0.0148	0.0148	1.00	0.0355	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.000	U	0.00360	0.00360	1.00	0.0220	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.6		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.315		0.100	0.103	1.00	0.0755	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0186	U	0.0257	0.0258	1.00	0.0278	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	0.354		0.101	0.105	1.00	0.0417	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Client Sample ID: FSS-105-082021
Lab Sample ID: 160-43157-15

Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	84.6		30 - 110	09/07/21 14:40	09/20/21 14:32	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.690	U	0.603	0.608	5.00	1.15	pCi/g	09/22/21 10:41	09/23/21 12:40	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.167	U	0.0689	0.0709		0.227	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Bismuth-212	0.0208	U	0.508	0.508		0.935	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Bismuth-214	0.0928	U	0.0738	0.0744		0.296	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Lead-212	**0.314**		0.0700	0.0805		0.0807	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Lead-214	**0.415**		0.0918	0.101		0.0773	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Potassium-40	**2.85**		0.718	0.773		0.612	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Radium-226	0.0928	U	0.0738	0.0744	1.00	0.296	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Thorium-232	0.167	U	0.0689	0.0709		0.227	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Americium-241	0.0508	U	0.116	0.116		0.199	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Cesium-137	0.0188	U	0.0452	0.0453		0.0795	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Cobalt-60	0.00348	U	0.0186	0.0186		0.0278	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Europium-152	0.0590	U	0.132	0.132		0.133	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Europium-154	0.0557	U	0.0911	0.0913		0.0866	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Europium-155	-0.0792	U	0.136	0.136		0.378	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Sodium-22	0.0219	U	0.0175	0.0176		0.0269	pCi/g	08/26/21 13:50	09/23/21 10:00	1
Zinc-65	0.000	U	0.0440	0.0440		0.206	pCi/g	08/26/21 13:50	09/23/21 10:00	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0215	U	0.910	0.910	5.00	1.62	pCi/g	09/16/21 12:04	09/23/21 14:13	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	88.0		40 - 110	09/16/21 12:04	09/23/21 14:13	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.40	U	1.51	1.52	5.00	2.55	pCi/g	09/07/21 14:41	09/29/21 07:01	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.6		30 - 110	09/07/21 14:41	09/29/21 07:01	1

Client Sample ID: FSS-105-082021
Lab Sample ID: 160-43157-15
Date Collected: 08/20/21 09:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 83.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.3**		0.27	0.017	mg/Kg	☼	09/15/21 07:52	09/15/21 20:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	23	7.3	ug/Kg	☼	09/15/21 15:00	09/16/21 11:45	1

Client Sample ID: FSS-106-082021
Lab Sample ID: 160-43157-16
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0831	U	0.139	0.139	3.00	0.274	pCi/g	09/08/21 10:20	10/01/21 14:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.7*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:11*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:11*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.180	U	0.220	0.221	1.00	0.378	pCi/g	09/19/21 15:37	09/21/21 02:49	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00191	U	0.00375	0.00375	1.00	0.0370	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00575	U	0.00650	0.00652	1.00	0.0474	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.1*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.136**		0.0662	0.0671	1.00	0.0546	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	-0.00478	U	0.00662	0.00663	1.00	0.0535	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.148**		0.0675	0.0686	1.00	0.0474	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*84.8*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.212	U	0.796	0.796	5.00	1.44	pCi/g	09/22/21 10:41	09/23/21 13:03	1

Client Sample ID: FSS-106-082021

Lab Sample ID: 160-43157-16
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.526**		0.134	0.144		0.104	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Bismuth-212	0.0306	U	0.592	0.592		1.11	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Bismuth-214	0.243	U	0.106	0.109		0.292	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Lead-212	**0.309**		0.0821	0.0879		0.0925	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Lead-214	**0.351**		0.103	0.108		0.131	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Potassium-40	**4.58**		1.17	1.25		0.771	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Radium-226	0.243	U	0.106	0.109	1.00	0.292	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Thorium-232	**0.526**		0.134	0.144		0.104	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Americium-241	-0.0770	U	0.188	0.188		0.321	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Cesium-137	0.0266	U	0.0542	0.0543		0.0952	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Cobalt-60	0.0175	U	0.00952	0.00967		0.0996	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Europium-152	0.123	U	0.0765	0.0775		0.162	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Europium-154	0.0610	U	0.0436	0.0440		0.119	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Europium-155	-0.000994	U	0.00248	0.00248		0.543	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Sodium-22	-0.0314	U	0.0649	0.0650		0.115	pCi/g	08/26/21 13:50	09/23/21 10:01	1
Zinc-65	0.000	U	0.0183	0.0183		0.311	pCi/g	08/26/21 13:50	09/23/21 10:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.124	U	0.932	0.932	5.00	1.66	pCi/g	09/16/21 12:04	09/23/21 15:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.7*		*40 - 110*	*09/16/21 12:04*	*09/23/21 15:19*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.257	U	1.52	1.52	5.00	2.71	pCi/g	09/07/21 14:41	09/29/21 07:35	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.1*		*30 - 110*	*09/07/21 14:41*	*09/29/21 07:35*	*1*

Client Sample ID: FSS-106-082021

Lab Sample ID: 160-43157-16
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 94.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.9**		0.24	0.015	mg/Kg	☼	09/15/21 07:52	09/15/21 20:56	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/15/21 15:00	09/16/21 11:47	1

Client Sample ID: FSS-107-082021

Date Collected: 08/20/21 09:15
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-17

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0305	U	0.165	0.165	3.00	0.297	pCi/g	09/08/21 10:20	10/01/21 14:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.1*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:11*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:11*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0796	U	0.194	0.194	1.00	0.377	pCi/g	09/19/21 15:37	09/21/21 03:12	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00590	U	0.00667	0.00669	1.00	0.0486	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00393	U	0.0164	0.0164	1.00	0.0441	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.0*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.181**		0.0864	0.0877	1.00	0.0973	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.000	U	0.0218	0.0218	1.00	0.0663	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.173**		0.0733	0.0747	1.00	0.0385	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.2*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.279	U	0.849	0.850	5.00	1.48	pCi/g	09/23/21 08:54	09/27/21 10:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.257**		0.192	0.194		0.208	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Bismuth-212	0.274	U	0.468	0.469		0.813	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Bismuth-214	**0.251**		0.114	0.117		0.113	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Lead-212	**0.262**		0.0721	0.0793		0.0859	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Lead-214	**0.282**		0.0842	0.0889		0.0898	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Potassium-40	**3.75**		0.884	0.960		0.720	pCi/g	08/26/21 13:50	09/22/21 15:40	1

Client Sample ID: FSS-107-082021

Lab Sample ID: 160-43157-17
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.251**		0.114	0.117	1.00	0.113	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Thorium-232	**0.257**		0.192	0.194		0.208	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Americium-241	0.0485	U	0.0668	0.0669		0.102	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Cesium-137	0.0191	U	0.0479	0.0479		0.0848	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Cobalt-60	0.00264	U	0.0259	0.0259		0.0642	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Europium-152	0.135	U	0.0749	0.0762		0.152	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Europium-154	0.0718	U	0.116	0.116		0.0994	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Europium-155	0.00130	U	0.00288	0.00288		0.265	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Sodium-22	-0.0347	U	0.0551	0.0552		0.0950	pCi/g	08/26/21 13:50	09/22/21 15:40	1
Zinc-65	0.000	U	0.0214	0.0214		0.190	pCi/g	08/26/21 13:50	09/22/21 15:40	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.336	U	0.947	0.947	5.00	1.69	pCi/g	09/16/21 12:04	09/23/21 16:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*83.1*		*40 - 110*	*09/16/21 12:04*	*09/23/21 16:26*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.117	U	1.39	1.39	5.00	2.48	pCi/g	09/07/21 14:41	09/29/21 08:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.0*		*30 - 110*	*09/07/21 14:41*	*09/29/21 08:09*	*1*

Client Sample ID: FSS-107-082021

Lab Sample ID: 160-43157-17
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 78.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.7**		0.33	0.020	mg/Kg	☼	09/15/21 07:52	09/15/21 20:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	23	7.6	ug/Kg	☼	09/15/21 15:00	09/16/21 11:55	1

Client Sample ID: FSS-108-082021

Lab Sample ID: 160-43157-18
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0886	U	0.154	0.154	3.00	0.299	pCi/g	09/08/21 10:20	10/01/21 14:11	1

Client Sample ID: FSS-108-082021

Date Collected: 08/20/21 09:15
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-18

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.8		40 - 110	09/08/21 10:20	10/01/21 14:11	1
Y Carrier	99.1		40 - 110	09/08/21 10:20	10/01/21 14:11	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.106	U	0.208	0.208	1.00	0.363	pCi/g	09/19/21 15:37	09/21/21 03:34	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00175	U	0.00343	0.00344	1.00	0.0339	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00175	U	0.00344	0.00344	1.00	0.0339	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.6		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.296**		0.111	0.114	1.00	0.0927	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.0569	U	0.0590	0.0592	1.00	0.0852	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.238**		0.0988	0.101	1.00	0.0818	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	66.4		30 - 110	09/07/21 14:40	09/20/21 14:32	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.631	U	0.796	0.798	5.00	1.49	pCi/g	09/23/21 08:54	09/27/21 11:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.186	U	0.183	0.184		0.212	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Bismuth-212	0.0110	U	0.532	0.532		0.982	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Bismuth-214	**0.204**		0.0772	0.0800		0.0910	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Lead-212	**0.290**		0.0642	0.0739		0.0659	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Lead-214	**0.299**		0.0853	0.0906		0.0875	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Potassium-40	**3.30**		0.790	0.856		0.649	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Radium-226	**0.204**		0.0772	0.0800	1.00	0.0910	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Thorium-232	0.186	U	0.183	0.184		0.212	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Americium-241	-0.0638	U	0.0772	0.0775		0.242	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Cesium-137	-0.000908	U	0.0424	0.0424		0.0784	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Cobalt-60	0.0126	U	0.0257	0.0257		0.0552	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Europium-152	-0.00384	U	0.00531	0.00532		0.157	pCi/g	08/26/21 13:50	09/22/21 15:37	1

Client Sample ID: FSS-108-082021

Lab Sample ID: 160-43157-18
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0480	U	0.0786	0.0787		0.107	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Europium-155	-0.000927	U	0.0909	0.0909		0.391	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Sodium-22	-0.00901	U	0.0379	0.0379		0.0711	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Zinc-65	-0.101	U	0.158	0.158		0.269	pCi/g	08/26/21 13:50	09/22/21 15:37	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.245	U	0.849	0.849	5.00	1.49	pCi/g	09/16/21 17:56	09/24/21 15:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*96.4*		*40 - 110*	*09/16/21 17:56*	*09/24/21 15:51*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0627	U	1.29	1.29	5.00	2.30	pCi/g	09/07/21 14:41	09/29/21 08:42	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.6*		*30 - 110*	*09/07/21 14:41*	*09/29/21 08:42*	*1*

Client Sample ID: FSS-108-082021

Lab Sample ID: 160-43157-18
Date Collected: 08/20/21 09:15
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 96.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.1		0.26	0.016	mg/Kg	☼	09/15/21 07:52	09/15/21 21:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/15/21 15:00	09/16/21 11:57	1

Client Sample ID: FSS-109-082021

Lab Sample ID: 160-43157-19
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.274		0.159	0.161	3.00	0.242	pCi/g	09/08/21 10:20	10/01/21 14:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.8*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:12*	*1*
Y Carrier	*97.6*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:12*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Client Sample ID: FSS-109-082021

Date Collected: 08/20/21 09:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-19

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0221	U	0.203	0.203	1.00	0.373	pCi/g	09/19/21 15:37	09/21/21 03:57	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00812	U	0.00796	0.00798	1.00	0.0542	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00609	U	0.0164	0.0164	1.00	0.0393	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*86.9*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.306**		0.0977	0.101	1.00	0.0582	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.00964	U	0.0284	0.0284	1.00	0.0644	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.333**		0.0994	0.103	1.00	0.0232	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.2*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.365	U	0.808	0.809	5.00	1.47	pCi/g	09/23/21 08:54	09/27/21 12:06	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.373**		0.161	0.165		0.324	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Bismuth-212	0.000	U	0.113	0.113		0.404	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Bismuth-214	**0.340**		0.104	0.109		0.102	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Lead-212	**0.304**		0.0805	0.0863		0.0966	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Lead-214	**0.345**		0.102	0.107		0.105	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Potassium-40	**3.38**		0.793	0.861		0.356	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Radium-226	**0.340**		0.104	0.109	1.00	0.102	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Thorium-232	**0.373**		0.161	0.165		0.324	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Americium-241	-0.00846	U	0.162	0.162		0.282	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Cesium-137	0.0174	U	0.0351	0.0351		0.0624	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Cobalt-60	0.0208	U	0.0560	0.0561		0.0662	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Europium-152	0.0872	U	0.163	0.163		0.178	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Europium-154	**0.140**		0.0587	0.0603		0.139	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Europium-155	0.000	U	0.0693	0.0693		0.506	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Sodium-22	0.0232	U	0.0203	0.0205		0.0342	pCi/g	08/26/21 13:50	09/22/21 15:36	1
Zinc-65	0.000	U	0.0398	0.0398		0.273	pCi/g	08/26/21 13:50	09/22/21 15:36	1

Client Sample ID: FSS-109-082021

Lab Sample ID: 160-43157-19
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.298	U	0.748	0.748	5.00	1.30	pCi/g	09/16/21 17:56	09/24/21 16:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*102*		*40 - 110*	*09/16/21 17:56*	*09/24/21 16:57*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.378	U	1.50	1.51	5.00	2.65	pCi/g	09/07/21 14:41	09/29/21 09:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*86.9*		*30 - 110*	*09/07/21 14:41*	*09/29/21 09:16*	*1*

Client Sample ID: FSS-109-082021

Lab Sample ID: 160-43157-19
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 97.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**10**		0.23	0.014	mg/Kg	☼	09/15/21 07:52	09/15/21 21:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**27**		19	6.1	ug/Kg	☼	09/15/21 15:00	09/16/21 12:00	1

Client Sample ID: FSS-110-082021

Lab Sample ID: 160-43157-20
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.132	U	0.159	0.160	3.00	0.269	pCi/g	09/08/21 10:20	10/01/21 14:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.1*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:13*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:13*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0636	U	0.207	0.207	1.00	0.371	pCi/g	09/19/21 15:37	09/21/21 04:20	1

Client Sample ID: FSS-110-082021

Date Collected: 08/20/21 09:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-20

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00379	U	0.00526	0.00527	1.00	0.0425	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00190	U	0.0170	0.0171	1.00	0.0540	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*86.5*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.263**		0.0946	0.0971	1.00	0.0568	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.00529	U	0.0220	0.0220	1.00	0.0592	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	**0.373**		0.110	0.114	1.00	0.0254	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.6*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.115	U	0.765	0.765	5.00	1.35	pCi/g	09/23/21 08:54	09/27/21 12:29	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.351**		0.136	0.141		0.176	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Bismuth-212	0.268	U	0.451	0.452		0.778	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Bismuth-214	**0.247**		0.0817	0.0855		0.0822	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Lead-212	**0.319**		0.0592	0.0717		0.0557	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Lead-214	**0.256**		0.0598	0.0653		0.0746	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Potassium-40	**3.22**		0.644	0.720		0.247	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Radium-226	**0.247**		0.0817	0.0855	1.00	0.0822	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Thorium-232	**0.351**		0.136	0.141		0.176	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Americium-241	-0.0196	U	0.102	0.102		0.136	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Cesium-137	0.000	U	0.0140	0.0140		0.0430	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Cobalt-60	-0.00443	U	0.0519	0.0520		0.0611	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Europium-152	0.0537	U	0.0378	0.0383		0.127	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Europium-154	0.0567	U	0.0746	0.0749		0.0738	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Europium-155	0.000	U	0.0307	0.0307		0.410	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Sodium-22	-0.0139	U	0.0327	0.0327		0.0590	pCi/g	08/26/21 13:50	09/22/21 15:35	1
Zinc-65	0.000	U	0.0524	0.0524		0.175	pCi/g	08/26/21 13:50	09/22/21 15:35	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.187	U	0.798	0.798	5.00	1.42	pCi/g	09/16/21 17:56	09/24/21 18:03	1

Client Sample ID: FSS-110-082021

Lab Sample ID: 160-43157-20
Date Collected: 08/20/21 09:30
Matrix: Solid
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Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	101		40 - 110	09/16/21 17:56	09/24/21 18:03	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.621	U	1.55	1.56	5.00	2.75	pCi/g	09/07/21 14:41	09/29/21 09:49	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	86.5		30 - 110	09/07/21 14:41	09/29/21 09:49	1

Client Sample ID: FSS-110-082021

Lab Sample ID: 160-43157-20
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 97.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	4.5		0.23	0.014	mg/Kg	☼	09/15/21 07:52	09/15/21 21:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg	☼	09/15/21 15:00	09/16/21 12:02	1

Client Sample ID: FSS-111-082021

Lab Sample ID: 160-43157-21
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0892	U	0.192	0.192	3.00	0.360	pCi/g	09/08/21 11:40	10/01/21 17:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.6		40 - 110	09/08/21 11:40	10/01/21 17:48	1
Y Carrier	94.6		40 - 110	09/08/21 11:40	10/01/21 17:48	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0171	U	0.194	0.194	1.00	0.361	pCi/g	09/19/21 15:37	09/21/21 04:42	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00381	U	0.0284	0.0284	1.00	0.0671	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00571	U	0.00647	0.00648	1.00	0.0471	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	88.6		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Client Sample ID: FSS-111-082021

Date Collected: 08/20/21 09:30
Date Received: 08/21/21 08:42

Lab Sample ID: 160-43157-21

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.178**		0.0755	0.0769	1.00	0.0495	pCi/g	09/07/21 14:40	09/22/21 22:33	1
Uranium-235/236	**0.0398**		0.0390	0.0392	1.00	0.0299	pCi/g	09/07/21 14:40	09/22/21 22:33	1
Uranium-238	**0.265**		0.0915	0.0940	1.00	0.0494	pCi/g	09/07/21 14:40	09/22/21 22:33	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.5*		*30 - 110*	*09/07/21 14:40*	*09/22/21 22:33*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.352	U	0.741	0.742	5.00	1.36	pCi/g	09/23/21 08:54	09/27/21 12:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.109	U	0.0670	0.0679		0.344	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Bismuth-212	**0.876**		0.350	0.361		0.269	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Bismuth-214	**0.301**		0.0979	0.103		0.0901	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Lead-212	**0.342**		0.0750	0.0866		0.0786	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Lead-214	**0.268**		0.0785	0.0832		0.0952	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Potassium-40	**2.60**		0.908	0.945		0.889	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Radium-226	**0.301**		0.0979	0.103	1.00	0.0901	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Thorium-232	0.109	U	0.0670	0.0679		0.344	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Americium-241	0.00225	U	0.108	0.108		0.153	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Cesium-137	0.0166	U	0.0420	0.0420		0.0748	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Cobalt-60	**0.0383**		0.0198	0.0201		0.0322	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Europium-152	**0.135**		0.0764	0.0776		0.123	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Europium-154	0.0552	U	0.0937	0.0939		0.0927	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Europium-155	0.000	U	0.0841	0.0841		0.274	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Sodium-22	0.00564	U	0.0295	0.0295		0.0583	pCi/g	08/26/21 13:50	09/22/21 16:24	1
Zinc-65	0.000	U	0.0295	0.0295		0.192	pCi/g	08/26/21 13:50	09/22/21 16:24	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.979	U	0.889	0.895	5.00	1.52	pCi/g	09/16/21 17:56	09/24/21 19:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.5*		*40 - 110*	*09/16/21 17:56*	*09/24/21 19:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.541	U	1.32	1.32	5.00	2.41	pCi/g	09/07/21 14:41	09/29/21 10:23	1

Client Sample ID: FSS-111-082021

Lab Sample ID: 160-43157-21
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	88.6		30 - 110	09/07/21 14:41	09/29/21 10:23	1

Client Sample ID: FSS-111-082021

Lab Sample ID: 160-43157-21
Date Collected: 08/20/21 09:30
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 83.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.6**		0.28	0.017	mg/Kg	☼	09/15/21 07:52	09/15/21 21:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	18	U	24	7.6	ug/Kg	☼	09/15/21 15:00	09/15/21 20:28	1

Client Sample ID: FSS-112-082021

Lab Sample ID: 160-43157-22
Date Collected: 08/20/21 10:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0346	U	0.171	0.171	3.00	0.307	pCi/g	09/08/21 11:40	10/01/21 17:49	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.5		40 - 110	09/08/21 11:40	10/01/21 17:49	1
Y Carrier	94.2		40 - 110	09/08/21 11:40	10/01/21 17:49	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0346	U	0.194	0.194	1.00	0.364	pCi/g	09/19/21 15:37	09/21/21 05:05	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00200	U	0.0245	0.0245	1.00	0.0629	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	0.00601	U	0.0162	0.0162	1.00	0.0388	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	84.1		30 - 110	09/07/21 14:07	09/21/21 23:50	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.264**		0.0910	0.0935	1.00	0.0391	pCi/g	09/07/21 14:40	09/22/21 22:33	1
Uranium-235/236	-0.00251	U	0.00492	0.00493	1.00	0.0486	pCi/g	09/07/21 14:40	09/22/21 22:33	1
Uranium-238	**0.240**		0.0866	0.0888	1.00	0.0390	pCi/g	09/07/21 14:40	09/22/21 22:33	1

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Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	86.0		30 - 110	09/07/21 14:40	09/22/21 22:33	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.745	U	0.711	0.716	5.00	1.35	pCi/g	09/23/21 08:54	09/27/21 13:14	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.311**		0.112	0.117		0.183	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Bismuth-212	0.159	U	0.284	0.285		0.500	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Bismuth-214	**0.382**		0.100	0.107		0.0928	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Lead-212	**0.370**		0.0667	0.0816		0.0659	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Lead-214	**0.404**		0.0756	0.0861		0.0765	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Potassium-40	**4.00**		0.786	0.883		0.560	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Radium-226	**0.382**		0.100	0.107	1.00	0.0928	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Thorium-232	**0.311**		0.112	0.117		0.183	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Americium-241	-0.0584	U	0.0681	0.0683		0.202	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Cesium-137	0.0157	U	0.0384	0.0384		0.0677	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Cobalt-60	0.0150	U	0.0403	0.0403		0.0477	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Europium-152	0.0992	U	0.133	0.133		0.106	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Europium-154	-0.00956	U	0.0176	0.0177		0.0945	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Europium-155	-0.000800	U	0.0801	0.0801		0.341	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Sodium-22	0.00222	U	0.0316	0.0316		0.0613	pCi/g	08/26/21 13:50	09/22/21 16:20	1
Zinc-65	0.000	U	0.0116	0.0116		0.186	pCi/g	08/26/21 13:50	09/22/21 16:20	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0748	U	0.811	0.811	5.00	1.45	pCi/g	09/16/21 17:56	09/24/21 20:15	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	97.0		40 - 110	09/16/21 17:56	09/24/21 20:15	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.224	U	1.45	1.45	5.00	2.62	pCi/g	09/07/21 14:41	09/29/21 10:56	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	84.1		30 - 110	09/07/21 14:41	09/29/21 10:56	1

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Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 98.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10		0.24	0.015	mg/Kg	☼	09/15/21 07:52	09/15/21 21:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	J	18	5.8	ug/Kg	☼	09/15/21 15:00	09/15/21 20:41	1

Client Sample ID: FSS-113-082021

Lab Sample ID: 160-43157-23
Date Collected: 08/20/21 10:00
Matrix: Solid
Date Received: 08/21/21 08:42

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0865	U	0.176	0.176	3.00	0.307	pCi/g	09/08/21 11:40	10/01/21 17:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.0*		*40 - 110*	*09/08/21 11:40*	*10/01/21 17:49*	*1*
Y Carrier	*97.6*		*40 - 110*	*09/08/21 11:40*	*10/01/21 17:49*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0640	U	0.200	0.200	1.00	0.388	pCi/g	09/19/21 15:37	09/21/21 05:28	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0272	U	0.0367	0.0367	1.00	0.0606	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.00227	U	0.00445	0.00445	1.00	0.0439	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.5*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.267		0.0977	0.100	1.00	0.0595	pCi/g	09/07/21 14:40	09/21/21 23:55	1
Uranium-235/236	0.0111	U	0.0217	0.0218	1.00	0.0333	pCi/g	09/07/21 14:40	09/21/21 23:55	1
Uranium-238	0.151		0.0719	0.0730	1.00	0.0267	pCi/g	09/07/21 14:40	09/21/21 23:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.5*		*30 - 110*	*09/07/21 14:40*	*09/21/21 23:55*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0270	U	0.830	0.830	5.00	1.47	pCi/g	09/23/21 08:54	09/27/21 13:36	1

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Date Collected: 08/20/21 10:00

Matrix: Solid

Date Received: 08/21/21 08:42

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.468**		0.145	0.152		0.0922	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Bismuth-212	0.220	U	0.570	0.570		1.02	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Bismuth-214	0.0799	U	0.157	0.157		0.355	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Lead-212	**0.406**		0.0868	0.0962		0.0938	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Lead-214	**0.294**		0.122	0.126		0.135	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Potassium-40	**4.51**		0.917	1.02		0.357	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Radium-226	0.0799	U	0.157	0.157	1.00	0.355	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Thorium-232	**0.468**		0.145	0.152		0.0922	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Americium-241	-0.0373	U	0.155	0.155		0.268	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Cesium-137	-0.0349	U	0.0758	0.0759		0.131	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Cobalt-60	-0.0610	U	0.111	0.111		0.120	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Europium-152	0.0919	U	0.163	0.164		0.202	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Europium-154	-0.0392	U	0.0887	0.0888		0.152	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Europium-155	-0.0878	U	0.326	0.326		0.557	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Sodium-22	-0.00621	U	0.0447	0.0447		0.0856	pCi/g	08/26/21 13:50	09/22/21 16:23	1
Zinc-65	-0.0432	U	0.154	0.154		0.274	pCi/g	08/26/21 13:50	09/22/21 16:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.172	U	0.806	0.807	5.00	1.45	pCi/g	09/16/21 17:56	09/24/21 21:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*96.8*		*40 - 110*	*09/16/21 17:56*	*09/24/21 21:22*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.206	U	1.64	1.64	5.00	2.99	pCi/g	09/07/21 14:41	09/29/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.5*		*30 - 110*	*09/07/21 14:41*	*09/29/21 11:30*	*1*

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Date Collected: 08/20/21 10:00

Matrix: Solid

Date Received: 08/21/21 08:42

Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.8**		0.25	0.015	mg/Kg	☼	09/15/21 07:52	09/15/21 21:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.3	ug/Kg	☼	09/15/21 15:00	09/15/21 20:43	1

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Lab Sample ID: 160-43157-24

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0197	U	0.180	0.180	3.00	0.333	pCi/g	09/08/21 11:40	10/01/21 17:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.6*		*40 - 110*	*09/08/21 11:40*	*10/01/21 17:49*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/08/21 11:40*	*10/01/21 17:49*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0635	U	0.207	0.208	1.00	0.375	pCi/g	09/19/21 15:37	09/21/21 05:50	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0227	U	0.0315	0.0316	1.00	0.0510	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	-0.00228	U	0.0204	0.0204	1.00	0.0648	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.2*		*30 - 110*	*09/11/21 11:55*	*09/20/21 13:14*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.152**		0.0725	0.0735	1.00	0.0563	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0393	U	0.0414	0.0415	1.00	0.0507	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.149**		0.0701	0.0711	1.00	0.0407	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*83.1*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.511	U	0.662	0.664	5.00	1.23	pCi/g	09/23/21 08:54	09/27/21 13:59	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.318**		0.212	0.215		0.229	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Bismuth-212	-0.252	U	0.614	0.615		1.08	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Bismuth-214	0.0850	U	0.109	0.109		0.338	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Lead-212	**0.349**		0.0790	0.0906		0.0888	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Lead-214	**0.272**		0.0784	0.0831		0.0602	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Potassium-40	**2.55**		0.745	0.787		0.685	pCi/g	08/26/21 13:50	09/22/21 15:37	1

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Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0850	U	0.109	0.109	1.00	0.338	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Thorium-232	**0.318**		0.212	0.215		0.229	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Americium-241	0.0540	U	0.135	0.135		0.232	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Cesium-137	-0.0210	U	0.112	0.112		0.117	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Cobalt-60	0.00600	U	0.0281	0.0281		0.0325	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Europium-152	0.0447	U	0.0878	0.0879		0.151	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Europium-154	-0.0358	U	0.0707	0.0707		0.121	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Europium-155	-0.00431	U	0.134	0.134		0.361	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Sodium-22	-0.00284	U	0.0392	0.0392		0.0764	pCi/g	08/26/21 13:50	09/22/21 15:37	1
Zinc-65	-0.106	U	0.0867	0.0873		0.288	pCi/g	08/26/21 13:50	09/22/21 15:37	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.114	U	0.825	0.825	5.00	1.47	pCi/g	09/16/21 17:56	09/24/21 22:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.0*		*40 - 110*	*09/16/21 17:56*	*09/24/21 22:28*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0180	U	1.63	1.63	5.00	2.52	pCi/g	09/12/21 17:46	09/27/21 15:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.2*		*30 - 110*	*09/12/21 17:46*	*09/27/21 15:45*	*1*

Client Sample ID: FSS-114-082021

Lab Sample ID: 160-43157-24
Date Collected: 08/20/21 10:00
Matrix: Solid
Date Received: 08/21/21 08:42
Percent Solids: 96.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.8**		0.23	0.014	mg/Kg	☼	09/15/21 07:52	09/15/21 21:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/15/21 15:00	09/15/21 20:46	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549130/1-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549130

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/15/21 07:52	09/16/21 01:56	1

Lab Sample ID: LCS 280-549130/2-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.9		mg/Kg		94	84 - 118

Lab Sample ID: LCSD 280-549130/3-A
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	20.0	19.0		mg/Kg		95	84 - 118	1	20

Lab Sample ID: 160-43154-B-9-B MS
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3.2	J1	19.8	14.0	J1	mg/Kg	☼	55	84 - 118

Lab Sample ID: 160-43154-B-9-C MSD
Matrix: Solid
Analysis Batch: 549986

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 549130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.2	J1	19.4	22.7	J1	mg/Kg	☼	101	84 - 118	47	20

Lab Sample ID: MB 280-549132/1-A
Matrix: Solid
Analysis Batch: 549978

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549132

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/15/21 07:52	09/15/21 19:42	1

Lab Sample ID: LCS 280-549132/2-A
Matrix: Solid
Analysis Batch: 549978

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	17.8		mg/Kg		89	84 - 118

Lab Sample ID: 160-43157-5 MS
Matrix: Solid
Analysis Batch: 549978

Client Sample ID: FSS-297-081921
Prep Type: Total/NA
Prep Batch: 549132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	51	J1	15.4	71.7	J1	mg/Kg	☼	137	84 - 118

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 160-43157-5 MSD
Matrix: Solid
Analysis Batch: 549978

Client Sample ID: FSS-297-081921
Prep Type: Total/NA
Prep Batch: 549132

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	51	J1	16.6	69.0		mg/Kg	☼	111	84 - 118	4	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-549893/1-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549893

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/15/21 15:00	09/15/21 17:53	1

Lab Sample ID: LCS 280-549893/2-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	332		ug/Kg		100	80 - 124

Lab Sample ID: LCSD 280-549893/3-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549893

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	335		ug/Kg		100	80 - 124	1	20

Lab Sample ID: 160-43157-1 MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-094-081921
Prep Type: Total/NA
Prep Batch: 549893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	400	399		ug/Kg	☼	100	80 - 124

Lab Sample ID: 160-43157-1 MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-094-081921
Prep Type: Total/NA
Prep Batch: 549893

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	365	362		ug/Kg	☼	99	80 - 124	10	20

Lab Sample ID: 160-43157-21 MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-111-082021
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	18	U	436	411		ug/Kg	☼	94	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43157-21 MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-111-082021
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	18	U	413	406		ug/Kg	☼	98	80 - 124	1	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-525828/1-A
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525828

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.3068	U	0.262	0.263	3.00	0.533	pCi/g	09/08/21 10:20	10/01/21 14:03	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*46.2*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:03*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/08/21 10:20*	*10/01/21 14:03*	*1*

Lab Sample ID: LCS 160-525828/2-A
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525828

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	7.118		1.05	3.00	0.736	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*31.4*	*Q*	*40 - 110*
Y Carrier	*96.1*		*40 - 110*

Lab Sample ID: 160-43157-1 DU
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: FSS-094-081921
Prep Type: Total/NA
Prep Batch: 525828

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.0253	U		-0.1436	U	0.120	3.00	0.253	pCi/g			1.17	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*83.7*		*40 - 110*
Y Carrier	*98.3*		*40 - 110*

Lab Sample ID: MB 160-525839/1-A
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525839

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.07208	U	0.199	0.199	3.00	0.349	pCi/g	09/08/21 11:40	10/01/21 17:48	1

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: MB 160-525839/1-A
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525839

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	81.8		40 - 110	09/08/21 11:40	10/01/21 17:48	1
Y Carrier	95.0		40 - 110	09/08/21 11:40	10/01/21 17:48	1

Lab Sample ID: LCS 160-525839/2-A
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525839

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	7.014		0.753	3.00	0.313	pCi/g	92	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Sr Carrier	85.7		40 - 110
Y Carrier	96.1		40 - 110

Lab Sample ID: 160-43157-21 DU
Matrix: Solid
Analysis Batch: 529702

Client Sample ID: FSS-111-082021
Prep Type: Total/NA
Prep Batch: 525839

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	-0.0892	U		-0.2110	U	0.168	3.00	0.340	pCi/g			0.94	3

Carrier	DU %Yield	DU Qualifier	Limits
Sr Carrier	77.5		40 - 110
Y Carrier	97.6		40 - 110

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-526979/1-A
Matrix: Solid
Analysis Batch: 527586

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526979

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.02222	U	0.196	0.196	1.00	0.357	pCi/g	09/14/21 15:23	09/17/21 12:27	1

Lab Sample ID: LCS 160-526979/2-A
Matrix: Solid
Analysis Batch: 527586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526979

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.61	8.256		0.958	1.00	0.397	pCi/g	108	79 - 125		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43157-11 MS
Matrix: Solid
Analysis Batch: 527586

Client Sample ID: FSS-101-082021
Prep Type: Total/NA
Prep Batch: 526979

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	0.132	U	7.47	7.236		0.869	1.00	0.396	pCi/g	95	78 - 122

Lab Sample ID: 160-43157-9 DU
Matrix: Solid
Analysis Batch: 527586

Client Sample ID: FSS-299-082021
Prep Type: Total/NA
Prep Batch: 526979

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	-0.0138	U	0.09451	U	0.217	1.00	0.379	pCi/g	0.71	3

Lab Sample ID: MB 160-527613/1-A
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527613

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.03303	U	0.212	0.212	1.00	0.392	pCi/g	09/19/21 15:37	09/21/21 00:56	1

Lab Sample ID: LCS 160-527613/2-A
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527613

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	7.61	7.084		0.850	1.00	0.390	pCi/g	93	79 - 125

Lab Sample ID: 160-43195-A-2-K MS
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 527613

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	0.152	U	7.48	6.554		0.790	1.00	0.366	pCi/g	86	78 - 122

Lab Sample ID: 160-43195-A-3-K DU
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527613

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	-0.0166	U	0.1936	U	0.220	1.00	0.373	pCi/g	1.41	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-525622/1-A
Matrix: Solid
Analysis Batch: 527170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525622

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01076	U	0.0313	0.0313	1.00	0.0677	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-235/236	0.005358	U	0.0223	0.0223	1.00	0.0600	pCi/g	09/05/21 20:32	09/15/21 22:19	1
Uranium-238	0.004297	U	0.0260	0.0260	1.00	0.0645	pCi/g	09/05/21 20:32	09/15/21 22:19	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.8*		*30 - 110*	*09/05/21 20:32*	*09/15/21 22:19*	*1*

Lab Sample ID: LCS 160-525622/2-A
Matrix: Solid
Analysis Batch: 526997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525622

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.194		0.675	1.00	0.0398	pCi/g	97	76 - 117		
Uranium-238			6.51	5.982		0.657	1.00	0.0459	pCi/g	92	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*84.7*		*30 - 110*

Lab Sample ID: 160-43124-D-27-J DU
Matrix: Solid
Analysis Batch: 526999

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525622

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.0642	U		0.1762		0.0868	1.00	0.0759	pCi/g			1.72	3
Uranium-235/236	-0.0200	U		0.04505	U	0.0476	1.00	0.0581	pCi/g			2.19	3
Uranium-238	0.224			0.2408		0.0988	1.00	0.0643	pCi/g			0.23	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*72.3*		*30 - 110*

Lab Sample ID: MB 160-525765/1-A
Matrix: Solid
Analysis Batch: 527926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525765

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.003769	U	0.0157	0.0157	1.00	0.0422	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-235/236	0.004690	U	0.0195	0.0195	1.00	0.0525	pCi/g	09/07/21 14:40	09/20/21 14:32	1
Uranium-238	0.01317	U	0.0212	0.0212	1.00	0.0364	pCi/g	09/07/21 14:40	09/20/21 14:32	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*94.4*		*30 - 110*	*09/07/21 14:40*	*09/20/21 14:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: LCS 160-525765/2-A
Matrix: Solid
Analysis Batch: 527929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525765

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.942		0.748	1.00	0.0423	pCi/g	109	76 - 117
Uranium-238	6.51	7.135		0.764	1.00	0.0488	pCi/g	110	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*79.6*		*30 - 110*

Lab Sample ID: 160-43157-4 DU
Matrix: Solid
Analysis Batch: 527933

Client Sample ID: FSS-097-081921
Prep Type: Total/NA
Prep Batch: 525765

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-233/234	0.285		0.3033		0.102	1.00	0.0547	pCi/g	0.26	3
Uranium-235/236	0.00695	U	0.01785	U	0.0288	1.00	0.0494	pCi/g	0.62	3
Uranium-238	0.282		0.3089		0.102	1.00	0.0396	pCi/g	0.38	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*89.4*		*30 - 110*

Lab Sample ID: MB 160-526532/1-A
Matrix: Solid
Analysis Batch: 528145

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526532

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01328	U	0.0253	0.0253	1.00	0.0496	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-235/236	0.03857	U	0.0439	0.0440	1.00	0.0617	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-238	0.03093	U	0.0352	0.0353	1.00	0.0495	pCi/g	09/12/21 17:44	09/20/21 11:58	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.2*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:58*	*1*

Lab Sample ID: LCS 160-526532/2-A
Matrix: Solid
Analysis Batch: 528146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526532

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.959		0.761	1.00	0.0526	pCi/g	109	76 - 117
Uranium-238	6.51	7.155		0.778	1.00	0.0625	pCi/g	110	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*71.9*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43157-24 DU
Matrix: Solid
Analysis Batch: 528106

Client Sample ID: FSS-114-082021
Prep Type: Total/NA
Prep Batch: 526532

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.152			0.1454		0.0726	1.00	0.0571	pCi/g			0.12	3
Uranium-235/236	0.0393	U		0.007985	U	0.0215	1.00	0.0515	pCi/g			1.31	3
Uranium-238	0.149			0.3309		0.108	1.00	0.0413	pCi/g			2.75	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*81.0*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-525615/1-A
Matrix: Solid
Analysis Batch: 526926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525615

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.001978	U	0.0298	0.0298	1.00	0.0720	pCi/g	09/05/21 17:56	09/14/21 17:40	1
Plutonium-239/240	0.003959	U	0.0165	0.0165	1.00	0.0444	pCi/g	09/05/21 17:56	09/14/21 17:40	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 17:56*	*09/14/21 17:40*	*1*

Lab Sample ID: LCS 160-525615/2-A
Matrix: Solid
Analysis Batch: 526927

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525615

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.842		0.667	1.00	0.0909	pCi/g	112	80 - 125		
Plutonium-239/240			5.28	5.786		0.661	1.00	0.0585	pCi/g	110	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*79.6*		*30 - 110*

Lab Sample ID: 160-43124-D-27-F DU
Matrix: Solid
Analysis Batch: 526929

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525615

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0106	U		-0.00229 8	U	0.00451	1.00	0.0445	pCi/g			0.65	3
Plutonium-239/240	-0.00266	U		-0.00460 0	U	0.00639	1.00	0.0515	pCi/g			0.46	3

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43124-D-27-F DU
Matrix: Solid
Analysis Batch: 526929

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525615

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*86.0*		*30 - 110*

Lab Sample ID: MB 160-525760/1-A
Matrix: Solid
Analysis Batch: 528012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525760

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.005762	U	0.0247	0.0247	1.00	0.0699	pCi/g	09/07/21 14:07	09/21/21 23:50	1
Plutonium-239/240	-0.003845	U	0.00533	0.00534	1.00	0.0431	pCi/g	09/07/21 14:07	09/21/21 23:50	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.3*		*30 - 110*	*09/07/21 14:07*	*09/21/21 23:50*	*1*

Lab Sample ID: LCS 160-525760/2-A
Matrix: Solid
Analysis Batch: 528013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525760

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.421		0.597	1.00	0.0725	pCi/g	104	80 - 125		
Plutonium-239/240			5.28	5.219		0.580	1.00	0.0466	pCi/g	99	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*99.8*		*30 - 110*

Lab Sample ID: 160-43157-4 DU
Matrix: Solid
Analysis Batch: 528015

Client Sample ID: FSS-097-081921
Prep Type: Total/NA
Prep Batch: 525760

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.00797	U		0.01348	U	0.0217	1.00	0.0373	pCi/g			1.45	3
Plutonium-239/240	-0.00199	U		0.003856	U	0.0160	1.00	0.0432	pCi/g			0.69	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*103*		*30 - 110*

Lab Sample ID: MB 160-526438/1-A
Matrix: Solid
Analysis Batch: 528127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526438

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.002080	U	0.00408	0.00408	1.00	0.0403	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	-0.002082	U	0.00408	0.00408	1.00	0.0403	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: MB 160-526438/1-A
Matrix: Solid
Analysis Batch: 528127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526438

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	84.7		30 - 110	09/11/21 11:55	09/20/21 13:14	1

Lab Sample ID: LCS 160-526438/2-A
Matrix: Solid
Analysis Batch: 528128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526438

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	4.862		0.581	1.00	0.0634	pCi/g	94	80 - 125		
Plutonium-239/240			5.28	5.311		0.621	1.00	0.0460	pCi/g	101	81 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	75.5		30 - 110

Lab Sample ID: 160-43157-24 DU
Matrix: Solid
Analysis Batch: 528130

Client Sample ID: FSS-114-082021
Prep Type: Total/NA
Prep Batch: 526438

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0227	U		-0.02092	U	0.0131	1.00	0.0738	pCi/g			2.50	3
Plutonium-239/240	-0.00228	U		-0.006282	U	0.00713	1.00	0.0518	pCi/g			0.36	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	81.3		30 - 110

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-528309/1-A
Matrix: Solid
Analysis Batch: 528693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528309

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.02703	U	0.841	0.841	5.00	1.49	pCi/g	09/22/21 09:02	09/23/21 05:53	1

Lab Sample ID: LCS 160-528309/2-A
Matrix: Solid
Analysis Batch: 528693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528309

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	85.02		9.53	5.00	1.50	pCi/g	101	75 - 125		

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43157-1 MS
Matrix: Solid
Analysis Batch: 528693

Client Sample ID: FSS-094-081921
Prep Type: Total/NA
Prep Batch: 528309

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.0470	U	74.7	76.04		8.53	5.00	1.33	pCi/g	102	29 - 128		

Lab Sample ID: 160-43157-1 DU
Matrix: Solid
Analysis Batch: 528693

Client Sample ID: FSS-094-081921
Prep Type: Total/NA
Prep Batch: 528309

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0470	U		-0.03436	U	0.708	5.00	1.26	pCi/g			0.02	3

Lab Sample ID: MB 160-528500/1-A
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528500

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.140	U	0.911	0.919	5.00	1.50	pCi/g	09/23/21 08:54	09/27/21 09:50	1

Lab Sample ID: LCS 160-528500/2-A
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528500

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	77.77		8.75	5.00	1.48	pCi/g	92	75 - 125		

Lab Sample ID: 160-43157-17 MS
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: FSS-107-082021
Prep Type: Total/NA
Prep Batch: 528500

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.279	U	64.9	64.67		7.24	5.00	1.14	pCi/g	99	29 - 128		

Lab Sample ID: 160-43157-17 DU
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: FSS-107-082021
Prep Type: Total/NA
Prep Batch: 528500

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.279	U		-0.7432	U	0.794	5.00	1.49	pCi/g			1.72	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-524257/1-A
Matrix: Solid
Analysis Batch: 528327

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524257

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.01134	U	0.0360	0.0360		0.265	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Bismuth-212	0.1406	U	0.810	0.811		1.47	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Bismuth-214	0.02344	U	0.0352	0.0353		0.324	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Lead-212	0.001236	U	0.0978	0.0978		0.174	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Lead-214	0.006017	U	0.107	0.107		0.196	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Potassium-40	-0.08877	U	0.453	0.453		0.945	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Radium-226	0.02344	U	0.0352	0.0353	1.00	0.324	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Thorium-232	0.01134	U	0.0360	0.0360		0.265	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Americium-241	-0.05574	U	0.140	0.141		0.243	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Cesium-137	0.02007	U	0.0439	0.0440		0.0785	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Cobalt-60	-0.04662	U	0.0944	0.0946		0.109	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-152	0.09335	U	0.0610	0.0617		0.149	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-154	0.01668	U	0.0319	0.0320		0.125	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Europium-155	-0.06081	U	0.170	0.170		0.292	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Sodium-22	0.003918	U	0.0388	0.0388		0.0792	pCi/g	08/26/21 13:50	09/22/21 16:21	1
Zinc-65	-0.005834	U	0.0676	0.0676		0.179	pCi/g	08/26/21 13:50	09/22/21 16:21	1

Lab Sample ID: LCS 160-524257/2-A
Matrix: Solid
Analysis Batch: 528304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524257

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	102.4		10.5		1.17	pCi/g	106	87 - 116		
Cesium-137			26.3	26.96		2.82		0.224	pCi/g	103	87 - 120		
Cobalt-60			8.55	8.926		0.927		0.0771	pCi/g	104	87 - 115		

Lab Sample ID: 160-43157-24 DU
Matrix: Solid
Analysis Batch: 528323

Client Sample ID: FSS-114-082021
Prep Type: Total/NA
Prep Batch: 524257

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.318			0.3911		0.121		0.0641	pCi/g			0.58	2
Bismuth-212	-0.252	U		-0.1919	U	0.643		1.13	pCi/g			0.13	2
Bismuth-214	0.0850	U		0.2262		0.0808		0.0814	pCi/g			2.04	2
Lead-212	0.349			0.3628		0.0790		0.0607	pCi/g			0.23	2
Lead-214	0.272			0.1872		0.0637		0.0883	pCi/g			1.59	2
Potassium-40	2.55			3.946		0.823		0.253	pCi/g			2.40	2
Radium-226	0.0850	U		0.2262		0.0808	1.00	0.0814	pCi/g			2.04	2
Thorium-232	0.318			0.3911		0.121		0.0641	pCi/g			0.58	2
Americium-241	0.0540	U		0.01370	U	0.109		0.189	pCi/g			0.46	2
Cesium-137	-0.0210	U		0.01699	U	0.0410		0.0720	pCi/g			0.62	2
Cobalt-60	0.00600	U		0.01701	U	0.0150		0.0251	pCi/g			0.68	2
Europium-152	0.0447	U		0.08362	U	0.122		0.119	pCi/g			0.51	2
Europium-154	-0.0358	U		-0.03557	U	0.0584		0.0992	pCi/g			0.01	2
Europium-155	-0.00431	U		-0.00608	U	0.0147		0.347	pCi/g			0.03	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43157-24 DU
Matrix: Solid
Analysis Batch: 528323

Client Sample ID: FSS-114-082021
Prep Type: Total/NA
Prep Batch: 524257

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Sodium-22	-0.00284	U	0.01970	U	0.0159		0.0242	pCi/g	1.05	2
Zinc-65	-0.106	U	-0.01371	U	0.113		0.203	pCi/g	1.27	2

Lab Sample ID: MB 160-524480/1-A
Matrix: Solid
Analysis Batch: 528916

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524480

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.05571	U	0.109	0.110		0.157	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Bismuth-212	0.0000	U	0.0759	0.0759		0.313	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Bismuth-214	0.04635	U	0.0371	0.0374		0.203	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Lead-212	-0.03331	U	0.0795	0.0796		0.138	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Lead-214	0.1370		0.0490	0.0510		0.0337	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Potassium-40	0.1893	U	0.579	0.580		0.668	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Radium-226	0.04635	U	0.0371	0.0374	1.00	0.203	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Thorium-232	0.05571	U	0.109	0.110		0.157	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Americium-241	0.03314	U	0.0743	0.0744		0.130	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Cesium-137	0.003196	U	0.0384	0.0384		0.0724	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Cobalt-60	0.01562	U	0.0116	0.0117		0.0647	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Europium-152	0.01595	U	0.0226	0.0227		0.132	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Europium-154	0.07142	U	0.0529	0.0534		0.0878	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Europium-155	0.01989	U	0.0654	0.0655		0.270	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Sodium-22	-0.003019	U	0.0307	0.0308		0.0625	pCi/g	08/27/21 16:29	09/27/21 09:59	1
Zinc-65	0.0000	U	0.0386	0.0386		0.172	pCi/g	08/27/21 16:29	09/27/21 09:59	1

Lab Sample ID: LCS 160-524480/2-A
Matrix: Solid
Analysis Batch: 528323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524480

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	96.41		9.92		1.09	pCi/g	100	87 - 116
Cesium-137	26.3	25.34		2.64		0.175	pCi/g	97	87 - 120
Cobalt-60	8.55	8.207		0.847		0.0744	pCi/g	96	87 - 115

Lab Sample ID: 160-43157-12 DU
Matrix: Solid
Analysis Batch: 528326

Client Sample ID: FSS-102-082021
Prep Type: Total/NA
Prep Batch: 524480

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.508		0.6006		0.147		0.106	pCi/g	0.77	2
Bismuth-212	0.469	U	-0.2185	U	0.959		1.70	pCi/g	1.07	2
Bismuth-214	0.303		0.3250		0.142		0.153	pCi/g	0.22	2
Lead-212	0.359		0.4143		0.107		0.115	pCi/g	0.75	2
Lead-214	0.443		0.3262		0.128		0.132	pCi/g	1.40	2
Potassium-40	3.88		5.059		1.15		0.410	pCi/g	1.49	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43157-12 DU
Matrix: Solid
Analysis Batch: 528326

Client Sample ID: FSS-102-082021
Prep Type: Total/NA
Prep Batch: 524480

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Radium-226	0.303			0.3250		0.142	1.00	0.153	pCi/g			0.22	2
Thorium-232	0.508			0.6006		0.147		0.106	pCi/g			0.77	2
Americium-241	0.0583	U		-0.07848	U	0.186		0.318	pCi/g			1.03	2
Cesium-137	-0.0179	U		0.02006	U	0.0446		0.0795	pCi/g			0.90	2
Cobalt-60	0.0299	U		0.008690	U	0.0535		0.0762	pCi/g			0.71	2
Europium-152	-0.00165	U		0.01188	U	0.0208		0.213	pCi/g			1.26	2
Europium-154	0.0714	U		0.05778	U	0.113		0.155	pCi/g			0.19	2
Europium-155	0.0265	U		-0.00916 5	U	0.0210		0.663	pCi/g			0.81	2
Sodium-22	-0.0240	U		-0.02134	U	0.0645		0.117	pCi/g			0.06	2
Zinc-65	-0.00477	U		-0.03630	U	0.169		0.302	pCi/g			0.30	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-527389/1-A
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527389

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.7503	U	1.00	1.01	5.00	1.73	pCi/g	09/16/21 12:04	09/22/21 17:15	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.2*		*40 - 110*	*09/16/21 12:04*	*09/22/21 17:15*	*1*

Lab Sample ID: LCS 160-527389/2-A
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527389

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	21.68		2.89	5.00	1.93	pCi/g	101	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*71.6*		*40 - 110*

Lab Sample ID: 160-43157-17 DU
Matrix: Solid
Analysis Batch: 528695

Client Sample ID: FSS-107-082021
Prep Type: Total/NA
Prep Batch: 527389

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	-0.336	U		-0.1196	U	1.04	5.00	1.84	pCi/g			0.30	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*78.2*		*40 - 110*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: MB 160-527434/1-A
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527434

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.6825	U	1.08	1.08	5.00	1.87	pCi/g	09/16/21 17:56	09/24/21 13:38	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*75.4*		*40 - 110*	*09/16/21 17:56*	*09/24/21 13:38*	*1*

Lab Sample ID: LCS 160-527434/2-A
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527434

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	17.81		2.30	5.00	1.40	pCi/g	83	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*99.4*		*40 - 110*

Lab Sample ID: 160-43195-A-12-H DU
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527434

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.844	U		0.03536	U	0.779	5.00	1.39	pCi/g			1.43	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*104*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-525621/1-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525621

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.3016	U	1.35	1.35	5.00	2.37	pCi/g	09/05/21 20:20	09/24/21 15:03	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.6*		*30 - 110*	*09/05/21 20:20*	*09/24/21 15:03*	*1*

Lab Sample ID: LCS 160-525621/2-A
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525621

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	25.63		3.61	5.00	3.12	pCi/g	129	75 - 125		

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	79.6		30 - 110

Lab Sample ID: 160-43124-D-27-H DU
Matrix: Solid
Analysis Batch: 528902

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525621

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.46	U		0.8748	U	1.33	5.00	2.24	pCi/g			0.55	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	86.0		30 - 110

Lab Sample ID: MB 160-525766/1-A
Matrix: Solid
Analysis Batch: 529337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525766

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.4197	U	1.37	1.37	5.00	2.52	pCi/g	09/07/21 14:41	09/28/21 23:11	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.3		30 - 110	09/07/21 14:41	09/28/21 23:11	1

Lab Sample ID: LCS 160-525766/2-A
Matrix: Solid
Analysis Batch: 529337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525766

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	18.07		2.81	5.00	2.34	pCi/g	91	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	99.8		30 - 110

Lab Sample ID: 160-43157-4 DU
Matrix: Solid
Analysis Batch: 529337

Client Sample ID: FSS-097-081921
Prep Type: Total/NA
Prep Batch: 525766

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	0.119	U		0.09504	U	1.24	5.00	2.22	pCi/g			0.03	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	103		30 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: MB 160-526533/1-A
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526533

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.213	U	1.64	1.65	5.00	2.42	pCi/g	09/12/21 17:46	09/27/21 14:38	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.7*		*30 - 110*	*09/12/21 17:46*	*09/27/21 14:38*	*1*

Lab Sample ID: LCS 160-526533/2-A
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526533

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	22.30		3.87	5.00	2.92	pCi/g	112	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*75.5*		*30 - 110*

Lab Sample ID: 160-43157-24 DU
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: FSS-114-082021
Prep Type: Total/NA
Prep Batch: 526533

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	0.0180	U		0.9626	U	1.57	5.00	2.29	pCi/g			0.82	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*81.3*		*30 - 110*

Metals

Prep Batch: 549130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	3050B	
160-43157-2	FSS-095-081921	Total/NA	Solid	3050B	
160-43157-3	FSS-096-081921	Total/NA	Solid	3050B	
160-43157-4	FSS-097-081921	Total/NA	Solid	3050B	
MB 280-549130/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549130/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 280-549130/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
160-43154-B-9-B MS	Matrix Spike	Total/NA	Solid	3050B	
160-43154-B-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Prep Batch: 549132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-5	FSS-297-081921	Total/NA	Solid	3050B	
160-43157-6	FSS-098-082021	Total/NA	Solid	3050B	
160-43157-7	FSS-298-082021	Total/NA	Solid	3050B	
160-43157-8	FSS-099-082021	Total/NA	Solid	3050B	
160-43157-9	FSS-299-082021	Total/NA	Solid	3050B	
160-43157-10	FSS-100-082021	Total/NA	Solid	3050B	
160-43157-11	FSS-101-082021	Total/NA	Solid	3050B	
160-43157-12	FSS-102-082021	Total/NA	Solid	3050B	
160-43157-13	FSS-103-082021	Total/NA	Solid	3050B	
160-43157-14	FSS-104-082021	Total/NA	Solid	3050B	
160-43157-15	FSS-105-082021	Total/NA	Solid	3050B	
160-43157-16	FSS-106-082021	Total/NA	Solid	3050B	
160-43157-17	FSS-107-082021	Total/NA	Solid	3050B	
160-43157-18	FSS-108-082021	Total/NA	Solid	3050B	
160-43157-19	FSS-109-082021	Total/NA	Solid	3050B	
160-43157-20	FSS-110-082021	Total/NA	Solid	3050B	
160-43157-21	FSS-111-082021	Total/NA	Solid	3050B	
160-43157-22	FSS-112-082021	Total/NA	Solid	3050B	
160-43157-23	FSS-113-082021	Total/NA	Solid	3050B	
160-43157-24	FSS-114-082021	Total/NA	Solid	3050B	
MB 280-549132/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549132/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43157-5 MS	FSS-297-081921	Total/NA	Solid	3050B	
160-43157-5 MSD	FSS-297-081921	Total/NA	Solid	3050B	

Prep Batch: 549893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	7471B	
160-43157-2	FSS-095-081921	Total/NA	Solid	7471B	
160-43157-3	FSS-096-081921	Total/NA	Solid	7471B	
160-43157-4	FSS-097-081921	Total/NA	Solid	7471B	
160-43157-5	FSS-297-081921	Total/NA	Solid	7471B	
160-43157-6	FSS-098-082021	Total/NA	Solid	7471B	
160-43157-7	FSS-298-082021	Total/NA	Solid	7471B	
160-43157-8	FSS-099-082021	Total/NA	Solid	7471B	
160-43157-9	FSS-299-082021	Total/NA	Solid	7471B	
160-43157-10	FSS-100-082021	Total/NA	Solid	7471B	
160-43157-11	FSS-101-082021	Total/NA	Solid	7471B	
160-43157-12	FSS-102-082021	Total/NA	Solid	7471B	

Metals (Continued)

Prep Batch: 549893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-13	FSS-103-082021	Total/NA	Solid	7471B	
160-43157-14	FSS-104-082021	Total/NA	Solid	7471B	
160-43157-15	FSS-105-082021	Total/NA	Solid	7471B	
160-43157-16	FSS-106-082021	Total/NA	Solid	7471B	
160-43157-17	FSS-107-082021	Total/NA	Solid	7471B	
160-43157-18	FSS-108-082021	Total/NA	Solid	7471B	
160-43157-19	FSS-109-082021	Total/NA	Solid	7471B	
160-43157-20	FSS-110-082021	Total/NA	Solid	7471B	
MB 280-549893/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549893/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549893/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43157-1 MS	FSS-094-081921	Total/NA	Solid	7471B	
160-43157-1 MSD	FSS-094-081921	Total/NA	Solid	7471B	

Prep Batch: 549895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-21	FSS-111-082021	Total/NA	Solid	7471B	
160-43157-22	FSS-112-082021	Total/NA	Solid	7471B	
160-43157-23	FSS-113-082021	Total/NA	Solid	7471B	
160-43157-24	FSS-114-082021	Total/NA	Solid	7471B	
160-43157-21 MS	FSS-111-082021	Total/NA	Solid	7471B	
160-43157-21 MSD	FSS-111-082021	Total/NA	Solid	7471B	

Analysis Batch: 549978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-5	FSS-297-081921	Total/NA	Solid	6020B	549132
160-43157-6	FSS-098-082021	Total/NA	Solid	6020B	549132
160-43157-7	FSS-298-082021	Total/NA	Solid	6020B	549132
160-43157-8	FSS-099-082021	Total/NA	Solid	6020B	549132
160-43157-9	FSS-299-082021	Total/NA	Solid	6020B	549132
160-43157-10	FSS-100-082021	Total/NA	Solid	6020B	549132
160-43157-11	FSS-101-082021	Total/NA	Solid	6020B	549132
160-43157-12	FSS-102-082021	Total/NA	Solid	6020B	549132
160-43157-13	FSS-103-082021	Total/NA	Solid	6020B	549132
160-43157-14	FSS-104-082021	Total/NA	Solid	6020B	549132
160-43157-15	FSS-105-082021	Total/NA	Solid	6020B	549132
160-43157-16	FSS-106-082021	Total/NA	Solid	6020B	549132
160-43157-17	FSS-107-082021	Total/NA	Solid	6020B	549132
160-43157-18	FSS-108-082021	Total/NA	Solid	6020B	549132
160-43157-19	FSS-109-082021	Total/NA	Solid	6020B	549132
160-43157-20	FSS-110-082021	Total/NA	Solid	6020B	549132
160-43157-21	FSS-111-082021	Total/NA	Solid	6020B	549132
160-43157-22	FSS-112-082021	Total/NA	Solid	6020B	549132
160-43157-23	FSS-113-082021	Total/NA	Solid	6020B	549132
160-43157-24	FSS-114-082021	Total/NA	Solid	6020B	549132
MB 280-549132/1-A	Method Blank	Total/NA	Solid	6020B	549132
LCS 280-549132/2-A	Lab Control Sample	Total/NA	Solid	6020B	549132
160-43157-5 MS	FSS-297-081921	Total/NA	Solid	6020B	549132
160-43157-5 MSD	FSS-297-081921	Total/NA	Solid	6020B	549132

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Metals

Analysis Batch: 549986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	6020B	549130
160-43157-2	FSS-095-081921	Total/NA	Solid	6020B	549130
160-43157-3	FSS-096-081921	Total/NA	Solid	6020B	549130
160-43157-4	FSS-097-081921	Total/NA	Solid	6020B	549130
MB 280-549130/1-A	Method Blank	Total/NA	Solid	6020B	549130
LCS 280-549130/2-A	Lab Control Sample	Total/NA	Solid	6020B	549130
LCSD 280-549130/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	549130
160-43154-B-9-B MS	Matrix Spike	Total/NA	Solid	6020B	549130
160-43154-B-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	6020B	549130

Analysis Batch: 550080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	7471B	549893
160-43157-2	FSS-095-081921	Total/NA	Solid	7471B	549893
160-43157-3	FSS-096-081921	Total/NA	Solid	7471B	549893
160-43157-4	FSS-097-081921	Total/NA	Solid	7471B	549893
160-43157-5	FSS-297-081921	Total/NA	Solid	7471B	549893
160-43157-6	FSS-098-082021	Total/NA	Solid	7471B	549893
160-43157-7	FSS-298-082021	Total/NA	Solid	7471B	549893
160-43157-8	FSS-099-082021	Total/NA	Solid	7471B	549893
160-43157-9	FSS-299-082021	Total/NA	Solid	7471B	549893
160-43157-10	FSS-100-082021	Total/NA	Solid	7471B	549893
160-43157-11	FSS-101-082021	Total/NA	Solid	7471B	549893
160-43157-12	FSS-102-082021	Total/NA	Solid	7471B	549893
160-43157-13	FSS-103-082021	Total/NA	Solid	7471B	549893
160-43157-14	FSS-104-082021	Total/NA	Solid	7471B	549893
160-43157-15	FSS-105-082021	Total/NA	Solid	7471B	549893
160-43157-16	FSS-106-082021	Total/NA	Solid	7471B	549893
160-43157-17	FSS-107-082021	Total/NA	Solid	7471B	549893
160-43157-18	FSS-108-082021	Total/NA	Solid	7471B	549893
160-43157-19	FSS-109-082021	Total/NA	Solid	7471B	549893
160-43157-20	FSS-110-082021	Total/NA	Solid	7471B	549893
160-43157-21	FSS-111-082021	Total/NA	Solid	7471B	549895
160-43157-22	FSS-112-082021	Total/NA	Solid	7471B	549895
160-43157-23	FSS-113-082021	Total/NA	Solid	7471B	549895
160-43157-24	FSS-114-082021	Total/NA	Solid	7471B	549895
MB 280-549893/1-A	Method Blank	Total/NA	Solid	7471B	549893
LCS 280-549893/2-A	Lab Control Sample	Total/NA	Solid	7471B	549893
LCSD 280-549893/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549893
160-43157-1 MS	FSS-094-081921	Total/NA	Solid	7471B	549893
160-43157-1 MSD	FSS-094-081921	Total/NA	Solid	7471B	549893
160-43157-21 MS	FSS-111-082021	Total/NA	Solid	7471B	549895
160-43157-21 MSD	FSS-111-082021	Total/NA	Solid	7471B	549895

General Chemistry

Analysis Batch: 548425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Moisture	
160-43157-2	FSS-095-081921	Total/NA	Solid	Moisture	
160-43157-3	FSS-096-081921	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 548425 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-4	FSS-097-081921	Total/NA	Solid	Moisture	
160-43157-5	FSS-297-081921	Total/NA	Solid	Moisture	
160-43157-6	FSS-098-082021	Total/NA	Solid	Moisture	
160-43157-7	FSS-298-082021	Total/NA	Solid	Moisture	
160-43157-8	FSS-099-082021	Total/NA	Solid	Moisture	
160-43157-9	FSS-299-082021	Total/NA	Solid	Moisture	
160-43157-10	FSS-100-082021	Total/NA	Solid	Moisture	
160-43157-11	FSS-101-082021	Total/NA	Solid	Moisture	
160-43157-12	FSS-102-082021	Total/NA	Solid	Moisture	
160-43157-13	FSS-103-082021	Total/NA	Solid	Moisture	
160-43157-14	FSS-104-082021	Total/NA	Solid	Moisture	
160-43157-15	FSS-105-082021	Total/NA	Solid	Moisture	
160-43157-16	FSS-106-082021	Total/NA	Solid	Moisture	
160-43157-17	FSS-107-082021	Total/NA	Solid	Moisture	
160-43157-18	FSS-108-082021	Total/NA	Solid	Moisture	
160-43157-19	FSS-109-082021	Total/NA	Solid	Moisture	
160-43157-20	FSS-110-082021	Total/NA	Solid	Moisture	
160-43157-21	FSS-111-082021	Total/NA	Solid	Moisture	
160-43157-22	FSS-112-082021	Total/NA	Solid	Moisture	
160-43157-23	FSS-113-082021	Total/NA	Solid	Moisture	
160-43157-24	FSS-114-082021	Total/NA	Solid	Moisture	
160-43157-1 DU	FSS-094-081921	Total/NA	Solid	Moisture	

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-13	FSS-103-082021	Total/NA	Solid	Dry and Grind	
160-43157-14	FSS-104-082021	Total/NA	Solid	Dry and Grind	
160-43157-15	FSS-105-082021	Total/NA	Solid	Dry and Grind	
160-43157-16	FSS-106-082021	Total/NA	Solid	Dry and Grind	
160-43157-17	FSS-107-082021	Total/NA	Solid	Dry and Grind	
160-43157-18	FSS-108-082021	Total/NA	Solid	Dry and Grind	
160-43157-19	FSS-109-082021	Total/NA	Solid	Dry and Grind	
160-43157-20	FSS-110-082021	Total/NA	Solid	Dry and Grind	
160-43157-21	FSS-111-082021	Total/NA	Solid	Dry and Grind	
160-43157-22	FSS-112-082021	Total/NA	Solid	Dry and Grind	
160-43157-23	FSS-113-082021	Total/NA	Solid	Dry and Grind	
160-43157-24	FSS-114-082021	Total/NA	Solid	Dry and Grind	
160-43157-17 DU	FSS-107-082021	Total/NA	Solid	Dry and Grind	
160-43157-21 DU	FSS-111-082021	Total/NA	Solid	Dry and Grind	
160-43157-24 DU	FSS-114-082021	Total/NA	Solid	Dry and Grind	

Leach Batch: 523723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-27-J DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Dry and Grind	
160-43157-2	FSS-095-081921	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 524116 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-3	FSS-096-081921	Total/NA	Solid	Dry and Grind	
160-43157-4	FSS-097-081921	Total/NA	Solid	Dry and Grind	
160-43157-5	FSS-297-081921	Total/NA	Solid	Dry and Grind	
160-43157-6	FSS-098-082021	Total/NA	Solid	Dry and Grind	
160-43157-7	FSS-298-082021	Total/NA	Solid	Dry and Grind	
160-43157-8	FSS-099-082021	Total/NA	Solid	Dry and Grind	
160-43157-9	FSS-299-082021	Total/NA	Solid	Dry and Grind	
160-43157-10	FSS-100-082021	Total/NA	Solid	Dry and Grind	
160-43157-11	FSS-101-082021	Total/NA	Solid	Dry and Grind	
160-43157-12	FSS-102-082021	Total/NA	Solid	Dry and Grind	
160-43157-12 DU	FSS-102-082021	Total/NA	Solid	Dry and Grind	

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-27-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 524257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-13	FSS-103-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-14	FSS-104-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-15	FSS-105-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-16	FSS-106-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-17	FSS-107-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-18	FSS-108-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-19	FSS-109-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-20	FSS-110-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-21	FSS-111-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-22	FSS-112-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-23	FSS-113-082021	Total/NA	Solid	Fill_Geo-21	523700
160-43157-24	FSS-114-082021	Total/NA	Solid	Fill_Geo-21	523700
MB 160-524257/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-524257/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43157-24 DU	FSS-114-082021	Total/NA	Solid	Fill_Geo-21	523700

Leach Batch: 524333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Dry and Grind	
160-43157-2	FSS-095-081921	Total/NA	Solid	Dry and Grind	
160-43157-3	FSS-096-081921	Total/NA	Solid	Dry and Grind	
160-43157-4	FSS-097-081921	Total/NA	Solid	Dry and Grind	
160-43157-5	FSS-297-081921	Total/NA	Solid	Dry and Grind	
160-43157-6	FSS-098-082021	Total/NA	Solid	Dry and Grind	
160-43157-7	FSS-298-082021	Total/NA	Solid	Dry and Grind	
160-43157-8	FSS-099-082021	Total/NA	Solid	Dry and Grind	
160-43157-9	FSS-299-082021	Total/NA	Solid	Dry and Grind	
160-43157-10	FSS-100-082021	Total/NA	Solid	Dry and Grind	
160-43157-11	FSS-101-082021	Total/NA	Solid	Dry and Grind	
160-43157-12	FSS-102-082021	Total/NA	Solid	Dry and Grind	
160-43157-1 DU	FSS-094-081921	Total/NA	Solid	Dry and Grind	
160-43157-4 DU	FSS-097-081921	Total/NA	Solid	Dry and Grind	

Rad

Leach Batch: 524351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-A-12-H DU	Duplicate	Total/NA	Solid	Dry and Grind	

Prep Batch: 524480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Fill_Geo-21	524116
160-43157-2	FSS-095-081921	Total/NA	Solid	Fill_Geo-21	524116
160-43157-3	FSS-096-081921	Total/NA	Solid	Fill_Geo-21	524116
160-43157-4	FSS-097-081921	Total/NA	Solid	Fill_Geo-21	524116
160-43157-5	FSS-297-081921	Total/NA	Solid	Fill_Geo-21	524116
160-43157-6	FSS-098-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-7	FSS-298-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-8	FSS-099-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-9	FSS-299-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-10	FSS-100-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-11	FSS-101-082021	Total/NA	Solid	Fill_Geo-21	524116
160-43157-12	FSS-102-082021	Total/NA	Solid	Fill_Geo-21	524116
MB 160-524480/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-524480/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43157-12 DU	FSS-102-082021	Total/NA	Solid	Fill_Geo-21	524116

Prep Batch: 525615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	ExtChrom	524333
160-43157-2	FSS-095-081921	Total/NA	Solid	ExtChrom	524333
160-43157-3	FSS-096-081921	Total/NA	Solid	ExtChrom	524333
MB 160-525615/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525615/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-27-F DU	Duplicate	Total/NA	Solid	ExtChrom	524231

Prep Batch: 525621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Leach_Precip	
160-43157-2	FSS-095-081921	Total/NA	Solid	Leach_Precip	
160-43157-3	FSS-096-081921	Total/NA	Solid	Leach_Precip	
MB 160-525621/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525621/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43124-D-27-H DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 525622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	ExtChrom	524333
160-43157-2	FSS-095-081921	Total/NA	Solid	ExtChrom	524333
160-43157-3	FSS-096-081921	Total/NA	Solid	ExtChrom	524333
MB 160-525622/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525622/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43124-D-27-J DU	Duplicate	Total/NA	Solid	ExtChrom	523723

Prep Batch: 525760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-4	FSS-097-081921	Total/NA	Solid	ExtChrom	524333
160-43157-5	FSS-297-081921	Total/NA	Solid	ExtChrom	524333

Rad (Continued)

Prep Batch: 525760 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-6	FSS-098-082021	Total/NA	Solid	ExtChrom	524333
160-43157-7	FSS-298-082021	Total/NA	Solid	ExtChrom	524333
160-43157-8	FSS-099-082021	Total/NA	Solid	ExtChrom	524333
160-43157-9	FSS-299-082021	Total/NA	Solid	ExtChrom	524333
160-43157-10	FSS-100-082021	Total/NA	Solid	ExtChrom	524333
160-43157-11	FSS-101-082021	Total/NA	Solid	ExtChrom	524333
160-43157-12	FSS-102-082021	Total/NA	Solid	ExtChrom	524333
160-43157-13	FSS-103-082021	Total/NA	Solid	ExtChrom	523700
160-43157-14	FSS-104-082021	Total/NA	Solid	ExtChrom	523700
160-43157-15	FSS-105-082021	Total/NA	Solid	ExtChrom	523700
160-43157-16	FSS-106-082021	Total/NA	Solid	ExtChrom	523700
160-43157-17	FSS-107-082021	Total/NA	Solid	ExtChrom	523700
160-43157-18	FSS-108-082021	Total/NA	Solid	ExtChrom	523700
160-43157-19	FSS-109-082021	Total/NA	Solid	ExtChrom	523700
160-43157-20	FSS-110-082021	Total/NA	Solid	ExtChrom	523700
160-43157-21	FSS-111-082021	Total/NA	Solid	ExtChrom	523700
160-43157-22	FSS-112-082021	Total/NA	Solid	ExtChrom	523700
160-43157-23	FSS-113-082021	Total/NA	Solid	ExtChrom	523700
MB 160-525760/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525760/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-4 DU	FSS-097-081921	Total/NA	Solid	ExtChrom	524333

Prep Batch: 525765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-4	FSS-097-081921	Total/NA	Solid	ExtChrom	524333
160-43157-5	FSS-297-081921	Total/NA	Solid	ExtChrom	524333
160-43157-6	FSS-098-082021	Total/NA	Solid	ExtChrom	524333
160-43157-7	FSS-298-082021	Total/NA	Solid	ExtChrom	524333
160-43157-8	FSS-099-082021	Total/NA	Solid	ExtChrom	524333
160-43157-9	FSS-299-082021	Total/NA	Solid	ExtChrom	524333
160-43157-10	FSS-100-082021	Total/NA	Solid	ExtChrom	524333
160-43157-11	FSS-101-082021	Total/NA	Solid	ExtChrom	524333
160-43157-12	FSS-102-082021	Total/NA	Solid	ExtChrom	524333
160-43157-13	FSS-103-082021	Total/NA	Solid	ExtChrom	523700
160-43157-14	FSS-104-082021	Total/NA	Solid	ExtChrom	523700
160-43157-15	FSS-105-082021	Total/NA	Solid	ExtChrom	523700
160-43157-16	FSS-106-082021	Total/NA	Solid	ExtChrom	523700
160-43157-17	FSS-107-082021	Total/NA	Solid	ExtChrom	523700
160-43157-18	FSS-108-082021	Total/NA	Solid	ExtChrom	523700
160-43157-19	FSS-109-082021	Total/NA	Solid	ExtChrom	523700
160-43157-20	FSS-110-082021	Total/NA	Solid	ExtChrom	523700
160-43157-21	FSS-111-082021	Total/NA	Solid	ExtChrom	523700
160-43157-22	FSS-112-082021	Total/NA	Solid	ExtChrom	523700
160-43157-23	FSS-113-082021	Total/NA	Solid	ExtChrom	523700
MB 160-525765/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-525765/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-4 DU	FSS-097-081921	Total/NA	Solid	ExtChrom	524333

Prep Batch: 525766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-4	FSS-097-081921	Total/NA	Solid	Leach_Precip	

Rad (Continued)

Prep Batch: 525766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-5	FSS-297-081921	Total/NA	Solid	Leach_Precip	
160-43157-6	FSS-098-082021	Total/NA	Solid	Leach_Precip	
160-43157-7	FSS-298-082021	Total/NA	Solid	Leach_Precip	
160-43157-8	FSS-099-082021	Total/NA	Solid	Leach_Precip	
160-43157-9	FSS-299-082021	Total/NA	Solid	Leach_Precip	
160-43157-10	FSS-100-082021	Total/NA	Solid	Leach_Precip	
160-43157-11	FSS-101-082021	Total/NA	Solid	Leach_Precip	
160-43157-12	FSS-102-082021	Total/NA	Solid	Leach_Precip	
160-43157-13	FSS-103-082021	Total/NA	Solid	Leach_Precip	
160-43157-14	FSS-104-082021	Total/NA	Solid	Leach_Precip	
160-43157-15	FSS-105-082021	Total/NA	Solid	Leach_Precip	
160-43157-16	FSS-106-082021	Total/NA	Solid	Leach_Precip	
160-43157-17	FSS-107-082021	Total/NA	Solid	Leach_Precip	
160-43157-18	FSS-108-082021	Total/NA	Solid	Leach_Precip	
160-43157-19	FSS-109-082021	Total/NA	Solid	Leach_Precip	
160-43157-20	FSS-110-082021	Total/NA	Solid	Leach_Precip	
160-43157-21	FSS-111-082021	Total/NA	Solid	Leach_Precip	
160-43157-22	FSS-112-082021	Total/NA	Solid	Leach_Precip	
160-43157-23	FSS-113-082021	Total/NA	Solid	Leach_Precip	
MB 160-525766/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-525766/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43157-4 DU	FSS-097-081921	Total/NA	Solid	Leach_Precip	

Prep Batch: 525828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	DPS-7	524333
160-43157-2	FSS-095-081921	Total/NA	Solid	DPS-7	524333
160-43157-3	FSS-096-081921	Total/NA	Solid	DPS-7	524333
160-43157-4	FSS-097-081921	Total/NA	Solid	DPS-7	524333
160-43157-5	FSS-297-081921	Total/NA	Solid	DPS-7	524333
160-43157-6	FSS-098-082021	Total/NA	Solid	DPS-7	524333
160-43157-7	FSS-298-082021	Total/NA	Solid	DPS-7	524333
160-43157-8	FSS-099-082021	Total/NA	Solid	DPS-7	524333
160-43157-9	FSS-299-082021	Total/NA	Solid	DPS-7	524333
160-43157-10	FSS-100-082021	Total/NA	Solid	DPS-7	524333
160-43157-11	FSS-101-082021	Total/NA	Solid	DPS-7	524333
160-43157-12	FSS-102-082021	Total/NA	Solid	DPS-7	524333
160-43157-13	FSS-103-082021	Total/NA	Solid	DPS-7	523700
160-43157-14	FSS-104-082021	Total/NA	Solid	DPS-7	523700
160-43157-15	FSS-105-082021	Total/NA	Solid	DPS-7	523700
160-43157-16	FSS-106-082021	Total/NA	Solid	DPS-7	523700
160-43157-17	FSS-107-082021	Total/NA	Solid	DPS-7	523700
160-43157-18	FSS-108-082021	Total/NA	Solid	DPS-7	523700
160-43157-19	FSS-109-082021	Total/NA	Solid	DPS-7	523700
160-43157-20	FSS-110-082021	Total/NA	Solid	DPS-7	523700
MB 160-525828/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-525828/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43157-1 DU	FSS-094-081921	Total/NA	Solid	DPS-7	524333

Rad

Prep Batch: 525839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-21	FSS-111-082021	Total/NA	Solid	DPS-7	523700
160-43157-22	FSS-112-082021	Total/NA	Solid	DPS-7	523700
160-43157-23	FSS-113-082021	Total/NA	Solid	DPS-7	523700
160-43157-24	FSS-114-082021	Total/NA	Solid	DPS-7	523700
MB 160-525839/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-525839/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43157-21 DU	FSS-111-082021	Total/NA	Solid	DPS-7	523700

Prep Batch: 526438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-24	FSS-114-082021	Total/NA	Solid	ExtChrom	523700
MB 160-526438/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526438/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-24 DU	FSS-114-082021	Total/NA	Solid	ExtChrom	523700

Prep Batch: 526532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-24	FSS-114-082021	Total/NA	Solid	ExtChrom	523700
MB 160-526532/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526532/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-24 DU	FSS-114-082021	Total/NA	Solid	ExtChrom	523700

Prep Batch: 526533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-24	FSS-114-082021	Total/NA	Solid	Leach_Precip	
MB 160-526533/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526533/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43157-24 DU	FSS-114-082021	Total/NA	Solid	Leach_Precip	

Prep Batch: 526979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-2	FSS-095-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-3	FSS-096-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-4	FSS-097-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-5	FSS-297-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-6	FSS-098-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-7	FSS-298-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-8	FSS-099-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-9	FSS-299-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-10	FSS-100-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-11	FSS-101-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-12	FSS-102-082021	Total/NA	Solid	LSC_Dist_Susp	
MB 160-526979/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-526979/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43157-11 MS	FSS-101-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-9 DU	FSS-299-082021	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	Ext_Chrom_LSC	524333

Rad (Continued)

Prep Batch: 527389 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-2	FSS-095-081921	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-3	FSS-096-081921	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-4	FSS-097-081921	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-5	FSS-297-081921	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-6	FSS-098-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-7	FSS-298-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-8	FSS-099-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-9	FSS-299-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-10	FSS-100-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-11	FSS-101-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-12	FSS-102-082021	Total/NA	Solid	Ext_Chrom_LSC	524333
160-43157-13	FSS-103-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-14	FSS-104-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-15	FSS-105-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-16	FSS-106-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-17	FSS-107-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
MB 160-527389/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-527389/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43157-17 DU	FSS-107-082021	Total/NA	Solid	Ext_Chrom_LSC	523700

Prep Batch: 527434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-18	FSS-108-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-19	FSS-109-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-20	FSS-110-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-21	FSS-111-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-22	FSS-112-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-23	FSS-113-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
160-43157-24	FSS-114-082021	Total/NA	Solid	Ext_Chrom_LSC	523700
MB 160-527434/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-527434/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43195-A-12-H DU	Duplicate	Total/NA	Solid	Ext_Chrom_LSC	524351

Prep Batch: 527613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-13	FSS-103-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-14	FSS-104-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-15	FSS-105-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-16	FSS-106-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-17	FSS-107-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-18	FSS-108-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-19	FSS-109-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-20	FSS-110-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-21	FSS-111-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-22	FSS-112-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-23	FSS-113-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-24	FSS-114-082021	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527613/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527613/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-A-2-K MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43195-A-3-K DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Rad

Prep Batch: 528309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-1	FSS-094-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-2	FSS-095-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-3	FSS-096-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-4	FSS-097-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-5	FSS-297-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-6	FSS-098-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-7	FSS-298-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-8	FSS-099-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-9	FSS-299-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-10	FSS-100-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-11	FSS-101-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-12	FSS-102-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-13	FSS-103-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-14	FSS-104-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-15	FSS-105-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-16	FSS-106-082021	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528309/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528309/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43157-1 MS	FSS-094-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43157-1 DU	FSS-094-081921	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-17	FSS-107-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-18	FSS-108-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-19	FSS-109-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-20	FSS-110-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-21	FSS-111-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-22	FSS-112-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-23	FSS-113-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-24	FSS-114-082021	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528500/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528500/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43157-17 MS	FSS-107-082021	Total/NA	Solid	LSC_Dist_Susp	
160-43157-17 DU	FSS-107-082021	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43157-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43157-1	FSS-094-081921	84.4	97.9
160-43157-1 DU	FSS-094-081921	83.7	98.3
160-43157-2	FSS-095-081921	83.1	96.8
160-43157-3	FSS-096-081921	79.6	98.3
160-43157-4	FSS-097-081921	82.4	98.7
160-43157-5	FSS-297-081921	85.3	95.0
160-43157-6	FSS-098-082021	81.8	96.8
160-43157-7	FSS-298-082021	82.0	98.3
160-43157-8	FSS-099-082021	80.8	98.3
160-43157-9	FSS-299-082021	79.6	96.1
160-43157-10	FSS-100-082021	78.8	97.2
160-43157-11	FSS-101-082021	80.4	95.3
160-43157-12	FSS-102-082021	83.0	99.4
160-43157-13	FSS-103-082021	84.4	96.1
160-43157-14	FSS-104-082021	80.3	99.4
160-43157-15	FSS-105-082021	82.2	97.6
160-43157-16	FSS-106-082021	78.7	98.3
160-43157-17	FSS-107-082021	79.1	97.2
160-43157-18	FSS-108-082021	78.8	99.1
160-43157-19	FSS-109-082021	83.8	97.6
160-43157-20	FSS-110-082021	82.1	98.7
160-43157-21	FSS-111-082021	83.6	94.6
160-43157-21 DU	FSS-111-082021	77.5	97.6
160-43157-22	FSS-112-082021	82.5	94.2
160-43157-23	FSS-113-082021	83.0	97.6
160-43157-24	FSS-114-082021	79.6	96.1
LCS 160-525828/2-A	Lab Control Sample	31.4 Q	96.1
LCS 160-525839/2-A	Lab Control Sample	85.7	96.1
MB 160-525828/1-A	Method Blank	46.2	98.7
MB 160-525839/1-A	Method Blank	81.8	95.0

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
160-43124-D-27-F DU	Duplicate	86.0
160-43157-1	FSS-094-081921	79.5
160-43157-2	FSS-095-081921	51.8
160-43157-3	FSS-096-081921	62.1
160-43157-4	FSS-097-081921	101
160-43157-4 DU	FSS-097-081921	103
160-43157-5	FSS-297-081921	102
160-43157-6	FSS-098-082021	100
160-43157-7	FSS-298-082021	90.9

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43157-8	FSS-099-082021	96.4						
160-43157-9	FSS-299-082021	93.9						
160-43157-10	FSS-100-082021	99.6						
160-43157-11	FSS-101-082021	89.5						
160-43157-12	FSS-102-082021	89.5						
160-43157-13	FSS-103-082021	84.4						
160-43157-14	FSS-104-082021	89.2						
160-43157-15	FSS-105-082021	89.6						
160-43157-16	FSS-106-082021	84.1						
160-43157-17	FSS-107-082021	87.0						
160-43157-18	FSS-108-082021	92.6						
160-43157-19	FSS-109-082021	86.9						
160-43157-20	FSS-110-082021	86.5						
160-43157-21	FSS-111-082021	88.6						
160-43157-22	FSS-112-082021	84.1						
160-43157-23	FSS-113-082021	78.5						
160-43157-24	FSS-114-082021	75.2						
160-43157-24 DU	FSS-114-082021	81.3						
LCS 160-525615/2-A	Lab Control Sample	79.6						
LCS 160-525760/2-A	Lab Control Sample	99.8						
LCS 160-526438/2-A	Lab Control Sample	75.5						
MB 160-525615/1-A	Method Blank	89.6						
MB 160-525760/1-A	Method Blank	92.3						
MB 160-526438/1-A	Method Blank	84.7						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43124-D-27-J DU	Duplicate	72.3						
160-43157-1	FSS-094-081921	77.8						
160-43157-2	FSS-095-081921	56.0						
160-43157-3	FSS-096-081921	53.8						
160-43157-4	FSS-097-081921	94.1						
160-43157-4 DU	FSS-097-081921	89.4						
160-43157-5	FSS-297-081921	81.9						
160-43157-6	FSS-098-082021	86.3						
160-43157-7	FSS-298-082021	82.0						
160-43157-8	FSS-099-082021	82.3						
160-43157-9	FSS-299-082021	90.0						
160-43157-10	FSS-100-082021	85.8						
160-43157-11	FSS-101-082021	86.4						
160-43157-12	FSS-102-082021	84.1						
160-43157-13	FSS-103-082021	85.3						
160-43157-14	FSS-104-082021	88.3						
160-43157-15	FSS-105-082021	84.6						

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43157-16	FSS-106-082021	84.8						
160-43157-17	FSS-107-082021	82.2						
160-43157-18	FSS-108-082021	66.4						
160-43157-19	FSS-109-082021	87.2						
160-43157-20	FSS-110-082021	80.6						
160-43157-21	FSS-111-082021	81.5						
160-43157-22	FSS-112-082021	86.0						
160-43157-23	FSS-113-082021	80.5						
160-43157-24	FSS-114-082021	83.1						
160-43157-24 DU	FSS-114-082021	81.0						
LCS 160-525622/2-A	Lab Control Sample	84.7						
LCS 160-525765/2-A	Lab Control Sample	79.6						
LCS 160-526532/2-A	Lab Control Sample	71.9						
MB 160-525622/1-A	Method Blank	82.8						
MB 160-525765/1-A	Method Blank	94.4						
MB 160-526532/1-A	Method Blank	79.2						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43157-1	FSS-094-081921	90.0						
160-43157-2	FSS-095-081921	85.2						
160-43157-3	FSS-096-081921	96.4						
160-43157-4	FSS-097-081921	91.6						
160-43157-5	FSS-297-081921	95.9						
160-43157-6	FSS-098-082021	43.9						
160-43157-7	FSS-298-082021	92.4						
160-43157-8	FSS-099-082021	78.4						
160-43157-9	FSS-299-082021	88.7						
160-43157-10	FSS-100-082021	80.2						
160-43157-11	FSS-101-082021	87.1						
160-43157-12	FSS-102-082021	76.8						
160-43157-13	FSS-103-082021	92.4						
160-43157-14	FSS-104-082021	87.7						
160-43157-15	FSS-105-082021	88.0						
160-43157-16	FSS-106-082021	86.7						
160-43157-17	FSS-107-082021	83.1						
160-43157-17 DU	FSS-107-082021	78.2						
160-43157-18	FSS-108-082021	96.4						
160-43157-19	FSS-109-082021	102						
160-43157-20	FSS-110-082021	101						
160-43157-21	FSS-111-082021	98.5						
160-43157-22	FSS-112-082021	97.0						
160-43157-23	FSS-113-082021	96.8						
160-43157-24	FSS-114-082021	97.0						

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43195-A-12-H DU	Duplicate	104						
LCS 160-527389/2-A	Lab Control Sample	71.6						
LCS 160-527434/2-A	Lab Control Sample	99.4						
MB 160-527389/1-A	Method Blank	85.2						
MB 160-527434/1-A	Method Blank	75.4						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43124-D-27-H DU	Duplicate	86.0						
160-43157-1	FSS-094-081921	79.5						
160-43157-2	FSS-095-081921	51.8						
160-43157-3	FSS-096-081921	62.1						
160-43157-4	FSS-097-081921	101						
160-43157-4 DU	FSS-097-081921	103						
160-43157-5	FSS-297-081921	102						
160-43157-6	FSS-098-082021	100						
160-43157-7	FSS-298-082021	90.9						
160-43157-8	FSS-099-082021	96.4						
160-43157-9	FSS-299-082021	93.9						
160-43157-10	FSS-100-082021	99.6						
160-43157-11	FSS-101-082021	89.5						
160-43157-12	FSS-102-082021	89.5						
160-43157-13	FSS-103-082021	84.4						
160-43157-14	FSS-104-082021	89.2						
160-43157-15	FSS-105-082021	89.6						
160-43157-16	FSS-106-082021	84.1						
160-43157-17	FSS-107-082021	87.0						
160-43157-18	FSS-108-082021	92.6						
160-43157-19	FSS-109-082021	86.9						
160-43157-20	FSS-110-082021	86.5						
160-43157-21	FSS-111-082021	88.6						
160-43157-22	FSS-112-082021	84.1						
160-43157-23	FSS-113-082021	78.5						
160-43157-24	FSS-114-082021	75.2						
160-43157-24 DU	FSS-114-082021	81.3						
LCS 160-525621/2-A	Lab Control Sample	79.6						
LCS 160-525766/2-A	Lab Control Sample	99.8						
LCS 160-526533/2-A	Lab Control Sample	75.5						
MB 160-525621/1-A	Method Blank	89.6						
MB 160-525766/1-A	Method Blank	92.3						
MB 160-526533/1-A	Method Blank	84.7						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/27/2021
Sample Receipt Date	08/26/2021
RJ Lee Group Job No.	AOH1063266-0
Authorization/P.O. No.	
Client Job No./Name	160-43157-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546660.HPL	FSS-094-081921 (160-43157-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546661.HPL	FSS-095-081921 (160-43157-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546662.HPL	FSS-096-081921 (160-43157-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063266-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546663.HPL	FSS-097-081921 (160-43157-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546664.HPL	FSS-297-081921 (160-43157-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546665.HPL	FSS-098-082021 (160-43157-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546666.HPL	FSS-298-082021 (160-43157-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546667.HPL	FSS-099-082021 (160-43157-8)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063266-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546668.HPL	FSS-299-082021 (160-43157-9)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546669.HPL	FSS-100-082021 (160-43157-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546670.HPL	FSS-101-082021 (160-43157-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546671.HPL	FSS-102-082021 (160-43157-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063266-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS
- AM = Amosite
- AC = Actinolite
- AN = Anthophyllite
- CH = Chrysotile
- CR = Crocidolite
- TR = Tremolite

NON-ASBESTOS
- CE = Cellulose
- MW = Mineral Wool
- FG = Fibrous Glass
- SF = Synthetic Fibers
- H = Hair
- W = Wollastonite
- OF = Other Fibers

NON-FIBROUS MATERIALS
- AM = Amphibole
- B = Binder
- CA = Carbonates
- CL = Clay
- F = Feldspar
- G = Gypsum
- HY = Hydromagnesite
- M = Miscellaneous
- MI = Mica
- OP = Opaque
- OR = Organic
- P = Perlite
- Q = Quartz
- T = Tar
- V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	09/27/2021
Sample Receipt Date	08/25/2021
RJ Lee Group Job No.	AOH1063242-0
Authorization/P.O. No.	
Client Job No./Name	160-43157-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546526.HPL	FSS-103-082021 (160-43157-13)	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EAF-09/23/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546527.HPL	FSS-104-082021 (160-43157-14)	Yes	1	ND		100.00	Q, CA, AM, OP, MI, M	EAF-09/23/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546528.HPL	FSS-105-082021 (160-43157-15)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/23/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063242-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546529.HPL	FSS-106-082021 (160-43157-16)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/23/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546530.HPL	FSS-107-082021 (160-43157-17)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/23/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546531.HPL	FSS-108-082021 (160-43157-18)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546532.HPL	FSS-109-082021 (160-43157-19)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/27/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546533.HPL	FSS-110-082021 (160-43157-20)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063242-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546534.HPL	FSS-111-082021 (160-43157-21)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546535.HPL	FSS-112-082021 (160-43157-22)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546536.HPL	FSS-113-082021 (160-43157-23)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546537.HPL	FSS-114-082021 (160-43157-24)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-09/25/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43157-1 RJ Lee Group Job No: AOH1063242-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS
- AM = Amosite
- AC = Actinolite
- AN = Anthophyllite
- CH = Chrysotile
- CR = Crocidolite
- TR = Tremolite

NON-ASBESTOS
- CE = Cellulose
- MW = Mineral Wool
- FG = Fibrous Glass
- SF = Synthetic Fibers
- H = Hair
- W = Wollastonite
- OF = Other Fibers

NON-FIBROUS MATERIALS
- AM = Amphibole
- B = Binder
- CA = Carbonates
- CL = Clay
- F = Feldspar
- G = Gypsum
- HY = Hydromagnesite
- M = Miscellaneous
- MI = Mica
- OP = Opaque
- OR = Organic
- P = Perlite
- Q = Quartz
- T = Tar
- V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.7
Samples FSS-115 through -144

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43195-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/15/2021 9:51:26 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-43195-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43195-2

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/25/2021 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 4.5º C, 17.5º C, 18.5º C and 27.4º C.

Receipt Exceptions

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples are logged in for MS and/or MSD analysis using the client sample ID as a parent sample ID, and the same ID with MS or MSD on the end is used for the spikes. This allows the system to calculate the QC statistics for sample duplicates. This was unknown to the client at the time the revised COC was delivered. The result was that three samples for three project points (one for each point) were analyzed in duplicate. One of each sample had an MS/MSD analyzed with it. The duplicate sample only results were reported in job 160-43195-2. Refer to Table 1 (Job 160-43195-1 - Updated Sample IDs) after the case narrative for a summary of this information.

ASBESTOS

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis. The report supplied by RJ LEE was annotated by the lab to account for the sample ID updates listed in the receipt exceptions section of the narrative.

METALS (ICP/MS)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/16/2021, 09/17/2021 and 10/14/2021 and analyzed on 09/16/2021, 09/20/2021 and 10/14/2021.

Preparation Batch 280-550205, Analytical Batch 280-550511:
The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Lead was detected in method blank MB 280-553378/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

MERCURY (CVAA)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/18/2021 and 10/13/2021 and analyzed on 09/19/2021 and 10/13/2021.

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

PERCENT SOLIDS

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/02/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/27/2021, prepared on 09/18/2021, 09/19/2021 and 09/20/2021 and analyzed on 09/30/2021, 10/04/2021 and 10/05/2021.

Preparation Batch 160-527618:
The strontium-90 LCS recovered outside the lower QC limit at 42.53% (70%). All of the sample tracer recoveries were in the upper QC range. The highest activity in the group is 0.3514pCi/g. If this result is adjusted for an LCS recovery at 100%, the value would still be at least an order of magnitude below the project action limit of 15pCi/g. To date, 92 project samples have not demonstrated any significant amount of strontium-90 activity. Therefore, given the weight of the site data, the results were reported in consultation with the client: FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), (LCS 160-527618/2-A), (MB 160-527618/1-A), and (160-43195-A-10-K DU).

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

TRITIUM

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/19/2021 and 09/20/2021 and analyzed on 09/20/2021, 09/21/2021, 09/27/2021 and 09/28/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

FSS-144-082421 (160-43195-33) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/27/2021, prepared on 09/11/2021 and 09/21/2021 and analyzed on 09/19/2021, 09/20/2021 and 09/24/2021.

Preparation Batch 160-528277:
The samples were prepared at a reduced aliquot due to matrix interference. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), and FSS-125-082421 (160-43195-11).

Preparation Batch 160-528278:
The samples were prepared at a reduced aliquot due to matrix interference. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), and FSS-125-082421 (160-43195-11).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/27/2021, prepared on 09/12/2021 and 09/21/2021 and analyzed on 09/20/2021 and 09/24/2021.

Preparation Batch 160-528279:
The samples were prepared at a reduced aliquot due to matrix interference. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), and FSS-125-082421 (160-43195-11).

Preparation Batch 160-526536:
Uranium-238 was detected in method blank MB 160-526536/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

Preparation Batch 160-528279:
Uranium-238 was detected in method blank MB 160-528279/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

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

CARBON-14 BY LSC

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/23/2021, 09/24/2021 and 09/26/2021 and analyzed on 09/27/2021 and 09/28/2021.

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

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/27/2021, prepared on 09/02/2021 and analyzed on 09/24/2021, 09/28/2021 and 09/29/2021.

Preparation Batch 160-525244:
For samples FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32), FSS-144-082421 (160-43195-33), (LCS 160-525244/2-A), (MB 160-525244/1-A), (160-43230-A-7-C), and (160-43230-A-7-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-525240:
The replicate precision for Bi-214/Ra-226 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for these statistical exceedances: (160-43195-A-20-D DU).

For samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), (LCS 160-525240/2-A), (MB 160-525240/1-A), and (160-43195-A-20-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15), FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/27/2021, prepared on 09/16/2021 and 09/20/2021 and analyzed on 09/24/2021, 09/25/2021 and 09/26/2021.

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

PLUTONIUM 241

Samples FSS-115-082421 (160-43195-1), FSS-116-082421 (160-43195-2), FSS-117-082421 (160-43195-3), FSS-118-082421 (160-43195-4), FSS-119-082421 (160-43195-5), FSS-120-082421 (160-43195-6), FSS-121-082421 (160-43195-7), FSS-122-082421 (160-43195-8), FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), FSS-126-082421 (160-43195-12), FSS-127-082421 (160-43195-13), FSS-128-082421 (160-43195-14), FSS-129-082421 (160-43195-15),

Job ID: 160-43195-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

FSS-130-082421 (160-43195-16), FSS-131-082421 (160-43195-17), FSS-132-082421 (160-43195-18), FSS-133-082421 (160-43195-22), FSS-134-082421 (160-43195-23), FSS-135-082421 (160-43195-24), FSS-139-082421 (160-43195-25), FSS-140-082421 (160-43195-26), FSS-141-082421 (160-43195-27), FSS-339-082421 (160-43195-28), FSS-340-082421 (160-43195-29), FSS-341-082421 (160-43195-30), FSS-142-082421 (160-43195-31), FSS-143-082421 (160-43195-32) and FSS-144-082421 (160-43195-33) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/12/2021 and 09/21/2021 and analyzed on 09/27/2021, 09/28/2021 and 09/30/2021.

Preparation Batch 160-528278:
The laboratory control sample duplicate (LCSD) recovery was outside the upper QC limit of 125% (130%), indicating a potential positive bias for the analyte: Pu-241 was not observed above the MDC/RL in the associated samples; therefore, the results were reported: FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), (LCS 160-528278/2-A), (LCSD 160-528278/3-A), and (MB 160-528278/1-A).

The following samples did not meet the requested limit (RL) due to a reduced sample volume, which was attributed to the presence of matrix interferences noted during the initial preparation: FSS-123-082421 (160-43195-9), FSS-124-082421 (160-43195-10), FSS-125-082421 (160-43195-11), (LCS 160-528278/2-A), (LCSD 160-528278/3-A), and (MB 160-528278/1-A).

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

Table 1. Job 160-43195-1 - Updated Sample IDs				
Project Sample Point	Lab sample ID	Initial Client Sample ID	Revised Client Sample ID	Results Reported in Job #
SU 7D - SS007 0"-6"	160-43195-19	FSS-133-082421	FSS-136-082421	160-43195-2
SU 7D - SS007 0"-6"	160-43195-22	FSS-136-082421	FSS-133-082421	160-43195-1
SU 7D - SS007 0"-6"	160-43195-22MS	FSS-136-082421MS	FSS-133-082421MS	160-43195-1
SU 7D - SS007 0"-6"	160-43195-22MSD	FSS-136-082421MSD	FSS-133-082421MSD	160-43195-1
SU 7D - SS007 6"-12"	160-43195-20	FSS-134-082421	FSS-137-082421	160-43195-2
SU 7D - SS007 6"-12"	160-43195-23	FSS-137-082421	FSS-134-082421	160-43195-1
SU 7D - SS007 6"-12"	160-43195-23MS	FSS-137-082421MS	FSS-134-082421MS	160-43195-1
SU 7D - SS007 6"-12"	160-43195-23MSD	FSS-137-082421MSD	FSS-134-082421MSD	160-43195-1
SU 7D - SS007 18"-24"	160-43195-21	FSS-135-082421	FSS-138-082421	160-43195-2
SU 7D - SS007 18"-24"	160-43195-24	FSS-138-082421	FSS-0135-082421	160-43195-1
SU 7D - SS007 18"-24"	160-43195-24MS	FSS-138-082421MS	FSS-0135-082421MS	160-43195-1
SU 7D - SS007 18"-24"	160-43195-24MSD	FSS-138-082421MSD	FSS-0135-082421MSD	160-43195-1

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___3___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-115-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 0"-6"
FSS-116-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 6"-12"
FSS-117-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 18"-24"
FSS-118-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 0"-6"
FSS-119-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 6"-12"
FSS-120-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 18"-24"
FSS-121-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 0"-6"
FSS-122-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 6"-12"
FSS-123-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 18"-24"
FSS-124-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 0"-6"
FSS-125-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 6"-12"
FSS-126-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Michia Kerrinhigan	Company: ETA SDL	Date/Time: AUG 25 2021
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-43195 Chain of Custody
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Eurofins TestAmerica, St. Louis
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Earth City, MO 63045-1205
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Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-127-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 0"-6"
FSS-128-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 6"-12"
FSS-129-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 18"-24"
FSS-130-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 0"-6"
FSS-131-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 6"-12"
FSS-132-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 18"-24"
FSS-133-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 0"-6"
FSS-134-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 6"-12"
FSS-135-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 18"-24"
FSS-136-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 0"-6" Dup
FSS-137-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 6"-12" Dup
FSS-138-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 18"-24" Dup

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kowinkiga	Company: ETA SN	Date/Time: AUG 25 2021
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	3 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-139-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 0"-6"
FSS-140-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 6"-12"
FSS-141-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 18"-24"
FSS-339-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 0"-6" Dup
FSS-340-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 6"-12" Dup
FSS-341-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 18"-24" Dup
FSS-142-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 0"-6"
FSS-143-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 6"-12"
FSS-144-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kominsky	Company: ETA	Date/Time: AUG 25 2021 08:33
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-115-082421 (160-43195-1)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-116-082421 (160-43195-2)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-117-082421 (160-43195-3)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-118-082421 (160-43195-4)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-119-082421 (160-43195-5)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-120-082421 (160-43195-6)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-121-082421 (160-43195-7)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-122-082421 (160-43195-8)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-123-082421 (160-43195-9)	8/24/21	09:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Trisha Kennington	Date/Time: AUG 26 2021 19:00	Company: ETA STL	Received by:	Date/Time: 08/27/2021 0935	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.7, 3.0 IR1 +1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-124-082421 (160-43195-10)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-125-082421 (160-43195-11)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-126-082421 (160-43195-12)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-127-082421 (160-43195-13)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-128-082421 (160-43195-14)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-129-082421 (160-43195-15)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-130-082421 (160-43195-16)	8/24/21	11:15 Eastern		Solid			X	X	X	1	
FSS-131-082421 (160-43195-17)	8/24/21	11:15 Eastern		Solid			X	X	X	1	
FSS-132-082421 (160-43195-18)	8/24/21	11:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Micha Kominsky	AUG 26 2021 17:00	ETA SD			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 08/27/2021 0935	Company: ETADEN
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-133-082421 (160-43195-19)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-134-082421 (160-43195-20)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-135-082421 (160-43195-21)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-136-082421 (160-43195-22)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-137-082421 (160-43195-23)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-138-082421 (160-43195-24)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-139-082421 (160-43195-25)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-140-082421 (160-43195-26)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-141-082421 (160-43195-27)	8/24/21	13:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Time: Method of Shipment:

Relinquished by: Micha Konnhizer	Date/Time: 08/26/2021 17:00	Company: ETA SRL	Received by: JOH	Date/Time: 08/27/2021 0935	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s)	COC No: 160-218247.4
Client Contact: Shipping/Receiving	Phone	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-339-082421 (160-43195-28)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-340-082421 (160-43195-29)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-341-082421 (160-43195-30)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-142-082421 (160-43195-31)	8/24/21	13:15 Eastern		Solid			X	X	X	1	
FSS-143-082421 (160-43195-32)	8/24/21	13:15 Eastern		Solid			X	X	X	1	
FSS-144-082421 (160-43195-33)	8/24/21	13:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Micha Konieczny	AUG 26 2021 17:00	ETA SD		08/27/2021 0935	ETADEN
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH10632777-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd.	Due Date Requested: 10/7/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			Other:
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site				

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5035 (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-115-082421 (160-43195-1)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-116-082421 (160-43195-2)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-117-082421 (160-43195-3)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-118-082421 (160-43195-4)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-119-082421 (160-43195-5)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-120-082421 (160-43195-6)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-121-082421 (160-43195-7)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-122-082421 (160-43195-8)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-123-082421 (160-43195-9)	8/24/21	09:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by: Micha Kerrihings	Date/Time: AUG 26 2021 17:00	Company: ETA SL	Received by: Linda Mangan	Date/Time: 08/27/21 9:40am	Company: RJ Lee Group		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

A6H10632770

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vanse, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vanse@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd, .	Due Date Requested: 10/7/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-124-082421 (160-43195-10)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-125-082421 (160-43195-11)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-126-082421 (160-43195-12)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-127-082421 (160-43195-13)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-128-082421 (160-43195-14)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-129-082421 (160-43195-15)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-130-082421 (160-43195-16)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-131-082421 (160-43195-17)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-132-082421 (160-43195-18)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification: Level 1 radioactive	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify): Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:
Relinquished by: Micha Kominkiewicz	Date/Time: AUG 26 2021 17:00 Company: EA SL
Relinquished by:	Date/Time: Company:
Relinquished by:	Date/Time: Company:

Received by: [illegible]	Date/Time: 08/27/2021 9:40 Am	Company: RJ Lee Group	
Received by:	Date/Time:	Company:	
Received by:	Date/Time:	Company:	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

ADH1063297-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: R.J Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd.	Due Date Requested: 10/7/2021	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-~~135~~136-082421 (160-43195-19)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~136~~137-082421 (160-43195-20)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~137~~138-082421 (160-43195-21)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~138~~133-082421 (160-43195-22)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~139~~134-082421 (160-43195-23)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~140~~135-082421 (160-43195-24)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-139-082421 (160-43195-25)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-140-082421 (160-43195-26)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-141-082421 (160-43195-27)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification: Level 1 radioactive	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: — Date: — Time:	Method of Shipment:

Relinquished by: Micha Kominsky	Date/Time: 10/6/2021 17:00	Company: ETA SD	Received by: Vania Maugan	Date/Time: 10/7/2021 9:40 AM	Company: RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No — Custody Seal No.: — Cooler Temperature(s) °C and Other Remarks:

Ver: 06-08-2021

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10155-21
10-15-21

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH106327-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.4
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/7/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			Other:
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Asbestos - PLM-EPA600-R-93/LAP-060.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-339-082421 (160-43195-28)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-340-082421 (160-43195-29)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-341-082421 (160-43195-30)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-142-082421 (160-43195-31)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-143-082421 (160-43195-32)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-144-082421 (160-43195-33)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification Level 1 radioactive	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date: Time:	Method of Shipment:
Relinquished by: Micha Konkinski Date/Time: AUG 26 2021 13:00 Company: EA STL	Received by: Linda Mangum Date/Time: 08/27/21 9:40 AM Company: RJ Lee Group
Relinquished by: Date/Time: Company:	Received by: Date/Time: Company:
Relinquished by: Date/Time: Company:	Received by: Date/Time: Company:
Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-1

Login Number: 43195
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-1

Login Number: 43195
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/27/21 03:41 PM

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-1

Login Number: 43195
List Number: 3
Creator: Rystrom, Joshua R

List Source: Eurofins TestAmerica, Denver
List Creation: 10/13/21 09:50 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43195-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43195-1	FSS-115-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-2	FSS-116-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-3	FSS-117-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-4	FSS-118-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-5	FSS-119-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-6	FSS-120-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-7	FSS-121-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-8	FSS-122-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-9	FSS-123-082421	Solid	08/24/21 09:00	08/25/21 13:20
160-43195-10	FSS-124-082421	Solid	08/24/21 09:30	08/25/21 13:20
160-43195-11	FSS-125-082421	Solid	08/24/21 09:30	08/25/21 13:20
160-43195-12	FSS-126-082421	Solid	08/24/21 09:30	08/25/21 13:20
160-43195-13	FSS-127-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-14	FSS-128-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-15	FSS-129-082421	Solid	08/24/21 08:15	08/25/21 13:20
160-43195-16	FSS-130-082421	Solid	08/24/21 11:15	08/25/21 13:20
160-43195-17	FSS-131-082421	Solid	08/24/21 11:15	08/25/21 13:20
160-43195-18	FSS-132-082421	Solid	08/24/21 11:15	08/25/21 13:20
160-43195-22	FSS-133-082421	Solid	08/24/21 14:15	08/25/21 13:20
160-43195-23	FSS-134-082421	Solid	08/24/21 14:15	08/25/21 13:20
160-43195-24	FSS-135-082421	Solid	08/24/21 14:15	08/25/21 13:20
160-43195-25	FSS-139-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-26	FSS-140-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-27	FSS-141-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-28	FSS-339-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-29	FSS-340-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-30	FSS-341-082421	Solid	08/24/21 13:45	08/25/21 13:20
160-43195-31	FSS-142-082421	Solid	08/24/21 13:15	08/25/21 13:20
160-43195-32	FSS-143-082421	Solid	08/24/21 13:15	08/25/21 13:20
160-43195-33	FSS-144-082421	Solid	08/24/21 13:15	08/25/21 13:20

Client Sample ID: FSS-115-082421

Date Collected: 08/24/21 08:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0154	U	0.242	0.242	3.00	0.441	pCi/g	09/18/21 16:37	09/30/21 21:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*59.8*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:36*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.105	U	0.189	0.189	1.00	0.371	pCi/g	09/19/21 15:37	09/21/21 06:13	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00817	U	0.0256	0.0256	1.00	0.0857	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	-0.00273	U	0.00534	0.00535	1.00	0.0528	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*63.6*		*30 - 110*	*09/11/21 11:55*	*09/20/21 13:14*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.226**		0.0948	0.0966	1.00	0.0720	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0328	U	0.0410	0.0411	1.00	0.0578	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.350**		0.114	0.118	1.00	0.0536	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*78.9*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.311	U	0.814	0.814	5.00	1.48	pCi/g	09/23/21 08:54	09/27/21 14:22	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.233**		0.100	0.103		0.176	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Bismuth-212	0.268	U	0.439	0.440		0.756	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Bismuth-214	**0.234**		0.0858	0.0890		0.0754	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Lead-212	**0.280**		0.0568	0.0670		0.0570	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Lead-214	**0.347**		0.0785	0.0860		0.0531	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Potassium-40	**4.35**		0.748	0.866		0.247	pCi/g	09/02/21 09:49	09/28/21 20:27	1

Client Sample ID: FSS-115-082421

Lab Sample ID: 160-43195-1
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.234**		0.0858	0.0890	1.00	0.0754	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Thorium-232	**0.233**		0.100	0.103		0.176	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Americium-241	0.0469	U	0.103	0.103		0.176	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Cesium-137	0.000	U	0.0313	0.0313		0.0776	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Cobalt-60	0.00621	U	0.0319	0.0319		0.0458	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Europium-152	-0.0445	U	0.0790	0.0792		0.135	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Europium-154	0.0438	U	0.0710	0.0711		0.0912	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Europium-155	-0.00382	U	0.00897	0.00898		0.403	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Sodium-22	0.0203	U	0.0264	0.0265		0.0442	pCi/g	09/02/21 09:49	09/28/21 20:27	1
Zinc-65	0.000	U	0.0158	0.0158		0.163	pCi/g	09/02/21 09:49	09/28/21 20:27	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.13	U	1.04	1.05	5.00	1.77	pCi/g	09/16/21 17:56	09/24/21 23:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.6*		*40 - 110*	*09/16/21 17:56*	*09/24/21 23:34*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.91	U	2.11	2.12	5.00	3.00	pCi/g	09/12/21 17:46	09/27/21 16:52	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*63.6*		*30 - 110*	*09/12/21 17:46*	*09/27/21 16:52*	*1*

Client Sample ID: FSS-115-082421

Lab Sample ID: 160-43195-1
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 89.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**11**		0.30	0.018	mg/Kg	☼	09/16/21 07:48	09/16/21 20:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**170**		21	6.8	ug/Kg	☼	09/18/21 15:00	09/19/21 14:30	1

Client Sample ID: FSS-116-082421

Lab Sample ID: 160-43195-2
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0629	U	0.180	0.180	3.00	0.319	pCi/g	09/18/21 16:37	09/30/21 21:37	1

Client Sample ID: FSS-116-082421

Date Collected: 08/24/21 08:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-2

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	70.0		40 - 110	09/18/21 16:37	09/30/21 21:37	1
Y Carrier	98.7		40 - 110	09/18/21 16:37	09/30/21 21:37	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.152	U	0.220	0.221	1.00	0.383	pCi/g	09/19/21 15:37	09/21/21 06:36	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0109	U	0.0106	0.0107	1.00	0.0725	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	0.00815	U	0.0220	0.0220	1.00	0.0526	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	65.9		30 - 110	09/11/21 11:55	09/20/21 13:14	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.265**		0.107	0.109	1.00	0.0883	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0343	U	0.0427	0.0428	1.00	0.0603	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.315**		0.111	0.114	1.00	0.0560	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	82.3		30 - 110	09/12/21 17:44	09/20/21 11:59	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.324	U	0.740	0.740	5.00	1.35	pCi/g	09/23/21 08:54	09/27/21 14:44	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.428**		0.138	0.145		0.131	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Bismuth-212	-0.0246	U	0.560	0.560		1.04	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Bismuth-214	**0.475**		0.109	0.120		0.0905	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Lead-212	**0.298**		0.0850	0.0930		0.112	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Lead-214	**0.379**		0.114	0.121		0.128	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Potassium-40	**4.05**		0.906	0.993		0.706	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Radium-226	**0.475**		0.109	0.120	1.00	0.0905	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Thorium-232	**0.428**		0.138	0.145		0.131	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Americium-241	0.0306	U	0.163	0.163		0.282	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Cesium-137	0.0149	U	0.0432	0.0432		0.0774	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Cobalt-60	-0.0132	U	0.0921	0.0921		0.0802	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Europium-152	0.0755	U	0.134	0.134		0.165	pCi/g	09/02/21 09:49	09/28/21 20:29	1

Client Sample ID: FSS-116-082421

Lab Sample ID: 160-43195-2
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0282	U	0.0432	0.0433		0.121	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Europium-155	0.0257	U	0.0857	0.0857		0.332	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Sodium-22	0.0242	U	0.0338	0.0339		0.0575	pCi/g	09/02/21 09:49	09/28/21 20:29	1
Zinc-65	0.000	U	0.0149	0.0149		0.239	pCi/g	09/02/21 09:49	09/28/21 20:29	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.275	U	0.757	0.757	5.00	1.32	pCi/g	09/16/21 17:56	09/25/21 00:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*100*		*40 - 110*	*09/16/21 17:56*	*09/25/21 00:40*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.34	U	1.83	1.83	5.00	3.10	pCi/g	09/12/21 17:46	09/27/21 17:26	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*65.9*		*30 - 110*	*09/12/21 17:46*	*09/27/21 17:26*	*1*

Client Sample ID: FSS-116-082421

Lab Sample ID: 160-43195-2
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 90.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.6		0.24	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 20:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	94		21	6.9	ug/Kg	☼	09/18/21 15:00	09/19/21 14:42	1

Client Sample ID: FSS-117-082421

Lab Sample ID: 160-43195-3
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0701	U	0.206	0.206	3.00	0.366	pCi/g	09/18/21 16:37	09/30/21 21:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*63.1*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:37*	*1*
Y Carrier	*99.4*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:37*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Client Sample ID: FSS-117-082421

Date Collected: 08/24/21 08:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-3

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0166	U	0.191	0.191	1.00	0.354	pCi/g	09/19/21 15:37	09/21/21 06:58	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0211	U	0.0388	0.0388	1.00	0.0739	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	0.00705	U	0.0190	0.0190	1.00	0.0455	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.2*		*30 - 110*	*09/11/21 11:55*	*09/20/21 13:14*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.270**		0.0999	0.102	1.00	0.0289	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0390	U	0.0481	0.0482	1.00	0.0742	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.262**		0.100	0.102	1.00	0.0595	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.4*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.131	U	0.828	0.828	5.00	1.49	pCi/g	09/23/21 08:54	09/27/21 15:07	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.678**		0.142	0.157		0.0759	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Bismuth-212	0.393	U	0.670	0.671		1.15	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Bismuth-214	**0.522**		0.112	0.124		0.0940	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Lead-212	**0.584**		0.0826	0.111		0.0757	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Lead-214	**0.425**		0.0874	0.0975		0.0873	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Potassium-40	**4.61**		0.835	0.954		0.538	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Radium-226	**0.522**		0.112	0.124	1.00	0.0940	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Thorium-232	**0.678**		0.142	0.157		0.0759	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Americium-241	-0.0140	U	0.139	0.139		0.241	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Cesium-137	**0.0831**		0.0317	0.0329		0.0258	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Cobalt-60	0.0192	U	0.0168	0.0169		0.0257	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Europium-152	0.0781	U	0.193	0.194		0.149	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Europium-154	0.0247	U	0.0306	0.0307		0.107	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Europium-155	0.0300	U	0.101	0.101		0.418	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Sodium-22	-0.0382	U	0.0545	0.0546		0.0927	pCi/g	09/02/21 09:49	09/28/21 21:05	1
Zinc-65	-0.0859	U	0.149	0.149		0.255	pCi/g	09/02/21 09:49	09/28/21 21:05	1

Client Sample ID: FSS-117-082421

Lab Sample ID: 160-43195-3
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.193	U	0.778	0.778	5.00	1.41	pCi/g	09/16/21 17:56	09/25/21 01:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*100*		*40 - 110*	*09/16/21 17:56*	*09/25/21 01:47*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.940	U	1.54	1.55	5.00	2.52	pCi/g	09/12/21 17:46	09/27/21 17:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*73.2*		*30 - 110*	*09/12/21 17:46*	*09/27/21 17:59*	*1*

Client Sample ID: FSS-117-082421

Lab Sample ID: 160-43195-3
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 88.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	15		0.25	0.015	mg/Kg	☼	09/16/21 07:48	09/16/21 20:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	61		21	6.8	ug/Kg	☼	09/18/21 15:00	09/19/21 14:45	1

Client Sample ID: FSS-118-082421

Lab Sample ID: 160-43195-4
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0368	U	0.0596	0.0597	3.00	0.152	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*58.0*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*
Y Carrier	*101*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0437	U	0.189	0.189	1.00	0.346	pCi/g	09/19/21 15:41	09/20/21 19:09	1

Client Sample ID: FSS-118-082421

Date Collected: 08/24/21 09:00
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-4

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00308	U	0.0463	0.0463	1.00	0.112	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.00616	U	0.00854	0.00855	1.00	0.0690	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*57.1*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.115	U	0.0936	0.0940	1.00	0.138	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	-0.0234	U	0.0535	0.0536	1.00	0.147	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.123**		0.0802	0.0809	1.00	0.0943	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.2*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.125	U	0.638	0.638	5.00	1.15	pCi/g	09/23/21 08:54	09/27/21 15:30	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.609**		0.174	0.184		0.0985	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Bismuth-212	0.204	U	0.910	0.910		1.62	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Bismuth-214	**0.454**		0.147	0.154		0.147	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Lead-212	**0.506**		0.0933	0.107		0.0865	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Lead-214	**0.377**		0.0965	0.104		0.112	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Potassium-40	**4.35**		0.931	1.03		0.382	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Radium-226	**0.454**		0.147	0.154	1.00	0.147	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Thorium-232	**0.609**		0.174	0.184		0.0985	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Americium-241	0.0852	U	0.0785	0.0791		0.128	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Cesium-137	0.0192	U	0.0651	0.0651		0.116	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Cobalt-60	0.0309	U	0.0247	0.0249		0.0379	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Europium-152	0.0945	U	0.150	0.151		0.182	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Europium-154	0.0648	U	0.108	0.108		0.133	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Europium-155	0.00357	U	0.0134	0.0134		0.557	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Sodium-22	0.0215	U	0.0386	0.0386		0.0686	pCi/g	09/02/21 09:49	09/28/21 21:04	1
Zinc-65	0.0521	U	0.146	0.146		0.259	pCi/g	09/02/21 09:49	09/28/21 21:04	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.0393	U	0.876	0.876	5.00	1.56	pCi/g	09/16/21 17:56	09/25/21 02:53	1

Client Sample ID: FSS-118-082421

Lab Sample ID: 160-43195-4
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	92.1		40 - 110	09/16/21 17:56	09/25/21 02:53	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.00	U	2.19	2.19	5.00	3.22	pCi/g	09/12/21 17:46	09/27/21 18:33	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	57.1		30 - 110	09/12/21 17:46	09/27/21 18:33	1

Client Sample ID: FSS-118-082421

Lab Sample ID: 160-43195-4
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 95.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.2		0.26	0.016	mg/Kg	☼	09/16/21 07:48	09/16/21 20:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 14:47	1

Client Sample ID: FSS-119-082421

Lab Sample ID: 160-43195-5
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.350	U	0.247	0.249	3.00	0.394	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	60.2		40 - 110	09/18/21 16:37	09/30/21 21:39	1
Y Carrier	100		40 - 110	09/18/21 16:37	09/30/21 21:39	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.144	U	0.197	0.197	1.00	0.338	pCi/g	09/19/21 15:41	09/20/21 19:31	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0248	U	0.0462	0.0462	1.00	0.0869	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.00677	U	0.00767	0.00769	1.00	0.0559	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	82.4		30 - 110	09/11/21 11:55	09/20/21 20:54	1

Client Sample ID: FSS-119-082421

Date Collected: 08/24/21 09:00
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-5

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.194**		0.0831	0.0846	1.00	0.0505	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.000	U	0.00550	0.00550	1.00	0.0337	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.223**		0.0883	0.0902	1.00	0.0435	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.7*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.689	U	0.793	0.797	5.00	1.49	pCi/g	09/23/21 08:54	09/27/21 15:52	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.386**		0.0824	0.0910		0.0901	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Bismuth-212	0.000	U	0.224	0.224		0.199	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Bismuth-214	**0.283**		0.0648	0.0710		0.0285	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Lead-212	**0.340**		0.0606	0.0744		0.0567	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Lead-214	**0.223**		0.0837	0.0867		0.119	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Potassium-40	**2.54**		0.567	0.622		0.243	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Radium-226	**0.283**		0.0648	0.0710	1.00	0.0285	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Thorium-232	**0.386**		0.0824	0.0910		0.0901	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Americium-241	0.0472	U	0.101	0.101		0.173	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Cesium-137	0.00298	U	0.0482	0.0482		0.0867	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Cobalt-60	-0.0447	U	0.0754	0.0755		0.0814	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Europium-152	0.0403	U	0.0941	0.0942		0.115	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Europium-154	0.0232	U	0.0265	0.0266		0.0876	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Europium-155	0.000	U	0.0620	0.0620		0.335	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Sodium-22	-0.0126	U	0.0381	0.0382		0.0692	pCi/g	09/02/21 09:49	09/28/21 21:07	1
Zinc-65	0.000	U	0.0348	0.0348		0.183	pCi/g	09/02/21 09:49	09/28/21 21:07	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.193	U	0.843	0.843	5.00	1.50	pCi/g	09/16/21 17:56	09/25/21 03:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.5*		*40 - 110*	*09/16/21 17:56*	*09/25/21 03:59*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.108	U	1.48	1.48	5.00	2.32	pCi/g	09/12/21 17:46	09/27/21 19:06	1

Client Sample ID: FSS-119-082421

Lab Sample ID: 160-43195-5
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	82.4		30 - 110	09/12/21 17:46	09/27/21 19:06	1

Client Sample ID: FSS-119-082421

Lab Sample ID: 160-43195-5
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.3**		0.27	0.017	mg/Kg	☼	09/16/21 07:48	09/16/21 20:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/18/21 15:00	09/19/21 14:50	1

Client Sample ID: FSS-120-082421

Lab Sample ID: 160-43195-6
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0736	U	0.187	0.187	3.00	0.330	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	68.8		40 - 110	09/18/21 16:37	09/30/21 21:39	1
Y Carrier	102		40 - 110	09/18/21 16:37	09/30/21 21:39	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.167	U	0.207	0.207	1.00	0.354	pCi/g	09/19/21 15:41	09/20/21 19:54	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0170	U	0.0352	0.0353	1.00	0.0695	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.00212	U	0.00416	0.00416	1.00	0.0411	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	96.1		30 - 110	09/11/21 11:55	09/20/21 20:54	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.105	U	0.0923	0.0927	1.00	0.117	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	-0.0218	U	0.0213	0.0214	1.00	0.145	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.170**		0.109	0.109	1.00	0.0845	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Client Sample ID: FSS-120-082421

Date Collected: 08/24/21 09:00
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-6

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	44.7		30 - 110	09/12/21 17:44	09/20/21 11:59	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.212	U	0.844	0.845	5.00	1.47	pCi/g	09/23/21 08:54	09/27/21 16:15	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.544**		0.153	0.162		0.127	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Bismuth-212	0.254	U	0.566	0.567		0.995	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Bismuth-214	0.124	U	0.0676	0.0688		0.322	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Lead-212	**0.345**		0.0822	0.0932		0.100	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Lead-214	**0.283**		0.0932	0.0976		0.0966	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Potassium-40	**4.68**		0.944	1.05		0.682	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Radium-226	0.124	U	0.0676	0.0688	1.00	0.322	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Thorium-232	**0.544**		0.153	0.162		0.127	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Americium-241	0.0669	U	0.168	0.168		0.287	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Cesium-137	-0.0162	U	0.0530	0.0530		0.0941	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Cobalt-60	-0.0369	U	0.0563	0.0564		0.104	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Europium-152	0.0779	U	0.144	0.145		0.149	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Europium-154	0.0712	U	0.0527	0.0532		0.0997	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Europium-155	-0.00216	U	0.00461	0.00462		0.307	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Sodium-22	-0.0385	U	0.0583	0.0584		0.0999	pCi/g	09/02/21 09:49	09/28/21 21:06	1
Zinc-65	0.000	U	0.0144	0.0144		0.239	pCi/g	09/02/21 09:49	09/28/21 21:06	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.160	U	0.785	0.785	5.00	1.43	pCi/g	09/16/21 17:56	09/25/21 05:05	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	99.5		40 - 110	09/16/21 17:56	09/25/21 05:05	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.270	U	1.31	1.31	5.00	1.98	pCi/g	09/12/21 17:46	09/27/21 19:40	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	96.1		30 - 110	09/12/21 17:46	09/27/21 19:40	1

Client Sample ID: FSS-120-082421

Lab Sample ID: 160-43195-6
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.5**		0.24	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:01	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 14:52	1

Client Sample ID: FSS-121-082421

Lab Sample ID: 160-43195-7
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.175	U	0.136	0.137	3.00	0.289	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*72.4*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0101	U	0.174	0.174	1.00	0.330	pCi/g	09/19/21 15:41	09/20/21 20:17	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0154	U	0.0247	0.0247	1.00	0.0425	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.00439	U	0.00609	0.00610	1.00	0.0492	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.1*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.197**		0.0837	0.0853	1.00	0.0548	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0221	U	0.0306	0.0306	1.00	0.0331	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.325**		0.106	0.109	1.00	0.0428	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.6*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.420	U	0.666	0.667	5.00	1.23	pCi/g	09/23/21 08:54	09/27/21 16:38	1

Client Sample ID: FSS-121-082421

Lab Sample ID: 160-43195-7

Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.180	U	0.165	0.166		0.208	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Bismuth-212	0.179	U	0.417	0.417		0.736	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Bismuth-214	**0.163**		0.0724	0.0743		0.0903	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Lead-212	**0.372**		0.0625	0.0783		0.0530	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Lead-214	**0.240**		0.0784	0.0821		0.0794	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Potassium-40	**2.99**		0.675	0.738		0.515	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Radium-226	**0.163**		0.0724	0.0743	1.00	0.0903	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Thorium-232	0.180	U	0.165	0.166		0.208	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Americium-241	-0.0530	U	0.118	0.118		0.202	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Cesium-137	0.00120	U	0.0301	0.0301		0.0564	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Cobalt-60	**0.0334**		0.0207	0.0210		0.0246	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-152	0.0384	U	0.0962	0.0963		0.0998	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-154	0.0342	U	0.0699	0.0700		0.0882	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-155	0.0182	U	0.0676	0.0676		0.177	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Sodium-22	-0.0494	U	0.0536	0.0538		0.0887	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Zinc-65	-0.00908	U	0.0984	0.0984		0.179	pCi/g	09/02/21 09:49	09/28/21 21:38	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.000	U	0.794	0.794	5.00	1.43	pCi/g	09/16/21 17:56	09/25/21 06:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.3*		*40 - 110*	*09/16/21 17:56*	*09/25/21 06:11*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.383	U	1.42	1.42	5.00	2.17	pCi/g	09/12/21 17:46	09/27/21 20:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.1*		*30 - 110*	*09/12/21 17:46*	*09/27/21 20:13*	*1*

Client Sample ID: FSS-121-082421

Lab Sample ID: 160-43195-7

Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 98.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.5**		0.23	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 14:55	1

Client Sample ID: FSS-122-082421

Date Collected: 08/24/21 09:00
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-8

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0582	U	0.168	0.168	3.00	0.319	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*72.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*
Y Carrier	*99.1*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:39*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.00963	U	0.182	0.182	1.00	0.343	pCi/g	09/19/21 15:41	09/20/21 20:39	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0258	U	0.0239	0.0240	1.00	0.0892	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.0259	U	0.0146	0.0148	1.00	0.0808	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.8*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.190**		0.0896	0.0910	1.00	0.0722	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0189	U	0.0361	0.0361	1.00	0.0707	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.172**		0.0848	0.0859	1.00	0.0676	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*76.2*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0135	U	0.838	0.838	5.00	1.49	pCi/g	09/23/21 08:54	09/27/21 17:00	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.528**		0.145	0.154		0.0921	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Bismuth-212	0.439	U	0.772	0.773		1.33	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Bismuth-214	**0.404**		0.143	0.149		0.133	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Lead-212	**0.480**		0.0941	0.106		0.101	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Lead-214	**0.368**		0.0989	0.105		0.102	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Potassium-40	**2.86**		0.730	0.783		0.357	pCi/g	09/02/21 09:49	09/28/21 21:37	1

Client Sample ID: FSS-122-082421

Lab Sample ID: 160-43195-8
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.404**		0.143	0.149	1.00	0.133	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Thorium-232	**0.528**		0.145	0.154		0.0921	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Americium-241	0.0158	U	0.138	0.138		0.193	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Cesium-137	-0.0495	U	0.0766	0.0767		0.131	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Cobalt-60	-0.0305	U	0.0781	0.0782		0.0885	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Europium-152	0.0474	U	0.0674	0.0676		0.445	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Europium-154	0.0131	U	0.0167	0.0167		0.129	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Europium-155	0.0220	U	0.0656	0.0657		0.564	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Sodium-22	0.000	U	0.0129	0.0129		0.0343	pCi/g	09/02/21 09:49	09/28/21 21:37	1
Zinc-65	-0.120	U	0.194	0.194		0.332	pCi/g	09/02/21 09:49	09/28/21 21:37	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.05	U	0.885	0.891	5.00	1.50	pCi/g	09/16/21 17:56	09/25/21 07:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*98.7*		*40 - 110*	*09/16/21 17:56*	*09/25/21 07:18*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.897	U	1.41	1.41	5.00	2.07	pCi/g	09/12/21 17:46	09/27/21 20:47	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.8*		*30 - 110*	*09/12/21 17:46*	*09/27/21 20:47*	*1*

Client Sample ID: FSS-122-082421

Lab Sample ID: 160-43195-8
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 97.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.9**		0.25	0.015	mg/Kg	☼	09/16/21 07:48	09/16/21 21:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/18/21 15:00	09/19/21 14:57	1

Client Sample ID: FSS-123-082421

Lab Sample ID: 160-43195-9
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0771	U	0.167	0.167	3.00	0.320	pCi/g	09/18/21 16:37	09/30/21 21:39	1

Client Sample ID: FSS-123-082421

Date Collected: 08/24/21 09:00
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-9

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	69.1		40 - 110	09/18/21 16:37	09/30/21 21:39	1
Y Carrier	100		40 - 110	09/18/21 16:37	09/30/21 21:39	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.211	U	0.200	0.201	1.00	0.329	pCi/g	09/19/21 15:41	09/20/21 21:02	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0105	U	0.0145	0.0145	1.00	0.117	pCi/g	09/21/21 14:53	09/24/21 11:19	1
Plutonium-239/240	0.0315	U	0.0599	0.0600	1.00	0.117	pCi/g	09/21/21 14:53	09/24/21 11:19	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	68.4		30 - 110	09/21/21 14:53	09/24/21 11:19	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.178**		0.132	0.133	1.00	0.157	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-235/236	-0.00652	U	0.0128	0.0128	1.00	0.126	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-238	0.141	U	0.118	0.119	1.00	0.149	pCi/g	09/21/21 15:00	09/24/21 11:55	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	75.6		30 - 110	09/21/21 15:00	09/24/21 11:55	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0375	U	0.505	0.505	5.00	0.905	pCi/g	09/24/21 08:07	09/28/21 03:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.399**		0.118	0.125		0.210	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Bismuth-212	0.000	U	0.309	0.309		0.675	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Bismuth-214	**0.348**		0.0877	0.0946		0.0527	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Lead-212	**0.310**		0.0604	0.0721		0.0586	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Lead-214	**0.224**		0.0781	0.0814		0.0763	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Potassium-40	**3.30**		0.668	0.746		0.259	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Radium-226	**0.348**		0.0877	0.0946	1.00	0.0527	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Thorium-232	**0.399**		0.118	0.125		0.210	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Americium-241	0.0492	U	0.108	0.108		0.185	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Cesium-137	-0.0174	U	0.0395	0.0395		0.0693	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Cobalt-60	-0.0116	U	0.0553	0.0554		0.0641	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Europium-152	0.0773	U	0.140	0.141		0.103	pCi/g	09/02/21 09:49	09/28/21 21:43	1

Client Sample ID: FSS-123-082421

Lab Sample ID: 160-43195-9
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0528	U	0.0659	0.0661		0.0682	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Europium-155	0.0702	U	0.227	0.227		0.387	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Sodium-22	-0.0460	U	0.0506	0.0508		0.0838	pCi/g	09/02/21 09:49	09/28/21 21:43	1
Zinc-65	0.0351	U	0.118	0.118		0.209	pCi/g	09/02/21 09:49	09/28/21 21:43	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.214	U	0.791	0.792	5.00	1.40	pCi/g	09/16/21 17:56	09/25/21 08:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*99.7*		*40 - 110*	*09/16/21 17:56*	*09/25/21 08:24*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-3.61	U J	4.44	4.45	5.00	8.47	pCi/g	09/21/21 14:59	09/30/21 06:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.4*		*30 - 110*	*09/21/21 14:59*	*09/30/21 06:56*	*1*

Client Sample ID: FSS-123-082421

Lab Sample ID: 160-43195-9
Date Collected: 08/24/21 09:00
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 98.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.5		0.25	0.015	mg/Kg	☼	09/16/21 07:48	09/16/21 21:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	09/18/21 15:00	09/19/21 15:00	1

Client Sample ID: FSS-124-082421

Lab Sample ID: 160-43195-10
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.116	U J	0.164	0.165	3.00	0.281	pCi/g	09/19/21 19:37	10/05/21 18:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.8*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:06*	*1*
Y Carrier	*99.4*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:06*	*1*

Client Sample ID: FSS-124-082421

Date Collected: 08/24/21 09:30
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-10

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.104	U	0.192	0.193	1.00	0.337	pCi/g	09/19/21 15:41	09/20/21 21:24	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00789	0.00789	1.00	0.0483	pCi/g	09/21/21 14:53	09/24/21 11:19	1
Plutonium-239/240	0.0161	U	0.0316	0.0316	1.00	0.0484	pCi/g	09/21/21 14:53	09/24/21 11:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.1*		*30 - 110*	*09/21/21 14:53*	*09/24/21 11:19*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.239**		0.140	0.141	1.00	0.163	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-235/236	-0.00512	U	0.0460	0.0460	1.00	0.146	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-238	**0.275**		0.133	0.135	1.00	0.0795	pCi/g	09/21/21 15:00	09/24/21 11:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.1*		*30 - 110*	*09/21/21 15:00*	*09/24/21 11:55*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0135	U	0.790	0.790	5.00	1.41	pCi/g	09/24/21 08:07	09/28/21 04:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.323**		0.153	0.157		0.236	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Bismuth-212	0.235	U	0.592	0.592		1.04	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Bismuth-214	0.0589	U	0.0421	0.0425		0.321	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Lead-212	**0.290**		0.0736	0.0822		0.0893	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Lead-214	**0.325**		0.0957	0.101		0.0968	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Potassium-40	**5.26**		0.974	1.11		0.658	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Radium-226	0.0589	U	0.0421	0.0425	1.00	0.321	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Thorium-232	**0.323**		0.153	0.157		0.236	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Americium-241	-0.0646	U	0.154	0.154		0.263	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Cesium-137	0.0240	U	0.0414	0.0415		0.0718	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Cobalt-60	-0.0479	U	0.0200	0.0205		0.100	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-152	0.0954	U	0.187	0.187		0.141	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-154	0.0260	U	0.0477	0.0477		0.0966	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Europium-155	-0.000469	U	0.139	0.139		0.311	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Sodium-22	0.00663	U	0.0274	0.0274		0.0536	pCi/g	09/02/21 09:49	09/28/21 21:38	1
Zinc-65	0.000	U	0.0197	0.0197		0.228	pCi/g	09/02/21 09:49	09/28/21 21:38	1

Client Sample ID: FSS-124-082421

Lab Sample ID: 160-43195-10
Matrix: Solid
Date Collected: 08/24/21 09:30
Date Received: 08/25/21 13:20

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.273	U	0.753	0.754	5.00	1.32	pCi/g	09/16/21 17:56	09/25/21 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*09/16/21 17:56*	*09/25/21 09:30*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.950	U J	3.77	3.77	5.00	6.92	pCi/g	09/21/21 14:59	09/30/21 07:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.1*		*30 - 110*	*09/21/21 14:59*	*09/30/21 07:30*	*1*

Client Sample ID: FSS-124-082421

Lab Sample ID: 160-43195-10
Matrix: Solid
Date Collected: 08/24/21 09:30
Percent Solids: 92.5
Date Received: 08/25/21 13:20

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	13		0.22	0.013	mg/Kg	☼	09/16/21 07:48	09/16/21 21:15	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	J	19	6.1	ug/Kg	☼	09/18/21 15:00	09/19/21 15:03	1

Client Sample ID: FSS-125-082421

Lab Sample ID: 160-43195-11
Matrix: Solid
Date Collected: 08/24/21 09:30
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0901	U J	0.161	0.161	3.00	0.278	pCi/g	09/19/21 19:37	10/05/21 18:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.2*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:07*	*1*
Y Carrier	*97.6*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:07*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.458		0.235	0.238	1.00	0.346	pCi/g	09/19/21 15:41	09/20/21 21:47	1

Client Sample ID: FSS-125-082421

Date Collected: 08/24/21 09:30
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-11

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00406	U	0.00796	0.00796	1.00	0.0786	pCi/g	09/21/21 14:53	09/24/21 11:19	1
Plutonium-239/240	0.000	U	0.00797	0.00797	1.00	0.0488	pCi/g	09/21/21 14:53	09/24/21 11:19	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.5*		*30 - 110*	*09/21/21 14:53*	*09/24/21 11:19*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.353**		0.160	0.162	1.00	0.129	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-235/236	0.0590	U	0.0735	0.0737	1.00	0.104	pCi/g	09/21/21 15:00	09/24/21 11:55	1
Uranium-238	**0.434**		0.172	0.176	1.00	0.106	pCi/g	09/21/21 15:00	09/24/21 11:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.1*		*30 - 110*	*09/21/21 15:00*	*09/24/21 11:55*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0341	U	0.597	0.597	5.00	1.06	pCi/g	09/24/21 08:07	09/28/21 04:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.413**		0.107	0.114		0.0725	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Bismuth-212	0.342	U	0.653	0.654		1.13	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Bismuth-214	**0.341**		0.102	0.108		0.0973	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Lead-212	**0.444**		0.0716	0.0911		0.0690	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Lead-214	**0.351**		0.0774	0.0853		0.0956	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Potassium-40	**5.71**		0.898	1.06		0.514	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Radium-226	**0.341**		0.102	0.108	1.00	0.0973	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Thorium-232	**0.413**		0.107	0.114		0.0725	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Americium-241	0.0311	U	0.102	0.102		0.135	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Cesium-137	**0.0971**		0.0354	0.0368		0.0279	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Cobalt-60	-0.00483	U	0.00902	0.00904		0.0731	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Europium-152	0.0363	U	0.0649	0.0651		0.115	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Europium-154	0.0763	U	0.0756	0.0760		0.0786	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Europium-155	0.0683	U	0.211	0.211		0.360	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Sodium-22	0.0172	U	0.0258	0.0258		0.0444	pCi/g	09/02/21 09:49	09/28/21 22:11	1
Zinc-65	-0.0223	U	0.117	0.117		0.209	pCi/g	09/02/21 09:49	09/28/21 22:11	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.248	U	0.749	0.749	5.00	1.30	pCi/g	09/16/21 17:56	09/25/21 10:36	1

Client Sample ID: FSS-125-082421

Lab Sample ID: 160-43195-11
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	104		40 - 110	09/16/21 17:56	09/25/21 10:36	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.58	U J	3.71	3.71	5.00	6.91	pCi/g	09/21/21 14:59	09/30/21 08:03	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	85.5		30 - 110	09/21/21 14:59	09/30/21 08:03	1

Client Sample ID: FSS-125-082421

Lab Sample ID: 160-43195-11
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	12		0.26	0.016	mg/Kg	☼	09/16/21 07:48	09/16/21 21:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	28		20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 15:10	1

Client Sample ID: FSS-126-082421

Lab Sample ID: 160-43195-12
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0326	U J	0.133	0.133	3.00	0.251	pCi/g	09/19/21 19:37	10/05/21 18:07	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	88.5		40 - 110	09/19/21 19:37	10/05/21 18:07	1
Y Carrier	98.3		40 - 110	09/19/21 19:37	10/05/21 18:07	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.283	U	0.212	0.214	1.00	0.336	pCi/g	09/19/21 15:41	09/20/21 22:10	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00440	U	0.0328	0.0328	1.00	0.0775	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.00440	U	0.0202	0.0202	1.00	0.0661	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.3		30 - 110	09/11/21 11:55	09/20/21 20:54	1

Client Sample ID: FSS-126-082421

Date Collected: 08/24/21 09:30
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-12

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.189**		0.0831	0.0846	1.00	0.0658	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	-0.00819	U	0.0257	0.0257	1.00	0.0859	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.129**		0.0693	0.0701	1.00	0.0623	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*95.1*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.152	U	0.793	0.793	5.00	1.39	pCi/g	09/24/21 08:07	09/28/21 05:20	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.567**		0.161	0.171		0.0936	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Bismuth-212	0.446	U	0.868	0.869		1.50	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Bismuth-214	**0.436**		0.115	0.123		0.104	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Lead-212	**0.550**		0.0928	0.109		0.0807	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Lead-214	0.102	U	0.0713	0.0720		0.242	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Potassium-40	**6.11**		1.08	1.23		0.363	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Radium-226	**0.436**		0.115	0.123	1.00	0.104	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Thorium-232	**0.567**		0.161	0.171		0.0936	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Americium-241	-0.0725	U	0.191	0.191		0.326	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Cesium-137	0.0308	U	0.0566	0.0567		0.0982	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Cobalt-60	0.00947	U	0.00830	0.00835		0.0675	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Europium-152	**0.292**		0.0947	0.0993		0.177	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Europium-154	**0.202**		0.0955	0.0977		0.133	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Europium-155	0.0337	U	0.101	0.101		0.525	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Sodium-22	-0.00630	U	0.0454	0.0454		0.0869	pCi/g	09/02/21 09:49	09/28/21 22:09	1
Zinc-65	0.000	U	0.0619	0.0619		0.249	pCi/g	09/02/21 09:49	09/28/21 22:09	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.844	U	0.783	0.788	5.00	1.32	pCi/g	09/16/21 17:56	09/25/21 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*108*		*40 - 110*	*09/16/21 17:56*	*09/25/21 11:42*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.639	U	1.41	1.41	5.00	2.09	pCi/g	09/12/21 17:46	09/27/21 23:01	1

Client Sample ID: FSS-126-082421

Lab Sample ID: 160-43195-12
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.3		30 - 110	09/12/21 17:46	09/27/21 23:01	1

Client Sample ID: FSS-126-082421

Lab Sample ID: 160-43195-12
Date Collected: 08/24/21 09:30
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 95.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**10**		0.26	0.016	mg/Kg	☼	09/16/21 07:48	09/16/21 21:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**25**		19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 15:13	1

Client Sample ID: FSS-127-082421

Lab Sample ID: 160-43195-13
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0572	U J	0.173	0.173	3.00	0.307	pCi/g	09/19/21 19:37	10/05/21 18:07	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	77.2		40 - 110	09/19/21 19:37	10/05/21 18:07	1
Y Carrier	97.6		40 - 110	09/19/21 19:37	10/05/21 18:07	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.141	U	0.201	0.201	1.00	0.346	pCi/g	09/19/21 15:41	09/20/21 22:32	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0341	U	0.0374	0.0375	1.00	0.120	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.0131	U	0.0257	0.0257	1.00	0.0893	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	77.6		30 - 110	09/11/21 11:55	09/20/21 20:54	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.132**		0.0694	0.0703	1.00	0.0510	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.00850	U	0.0229	0.0229	1.00	0.0549	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.164**		0.0756	0.0768	1.00	0.0273	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Client Sample ID: FSS-127-082421

Date Collected: 08/24/21 08:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-13

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	76.6		30 - 110	09/12/21 17:44	09/20/21 11:59	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.153	U	0.691	0.691	5.00	1.21	pCi/g	09/24/21 08:07	09/28/21 05:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.213**		0.110	0.112		0.103	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Bismuth-212	0.00848	U	0.461	0.461		0.843	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Bismuth-214	**0.289**		0.0771	0.0826		0.0569	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Lead-212	**0.326**		0.0668	0.0786		0.0594	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Lead-214	**0.279**		0.0837	0.0884		0.112	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Potassium-40	**3.85**		0.678	0.781		0.229	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Radium-226	**0.289**		0.0771	0.0826	1.00	0.0569	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Thorium-232	**0.213**		0.110	0.112		0.103	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Americium-241	0.0478	U	0.101	0.102		0.173	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Cesium-137	0.0254	U	0.0587	0.0588		0.101	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Cobalt-60	0.00963	U	0.0259	0.0260		0.0425	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Europium-152	0.0802	U	0.118	0.118		0.118	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Europium-154	0.0653	U	0.0759	0.0762		0.0718	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Europium-155	0.0561	U	0.170	0.170		0.290	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Sodium-22	-0.00396	U	0.0286	0.0286		0.0547	pCi/g	09/02/21 09:49	09/28/21 22:16	1
Zinc-65	0.00321	U	0.0899	0.0899		0.165	pCi/g	09/02/21 09:49	09/28/21 22:16	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.128	U	0.713	0.713	5.00	1.29	pCi/g	09/16/21 17:56	09/25/21 13:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	110		40 - 110	09/16/21 17:56	09/25/21 13:55	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.231	U	1.59	1.59	5.00	2.54	pCi/g	09/12/21 17:46	09/27/21 23:34	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	77.6		30 - 110	09/12/21 17:46	09/27/21 23:34	1

Client Sample ID: FSS-127-082421

Lab Sample ID: 160-43195-13
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	11		0.22	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	11	J	19	6.1	ug/Kg	☼	09/18/21 15:00	09/19/21 15:15	1

Client Sample ID: FSS-128-082421

Lab Sample ID: 160-43195-14
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.217	U J	0.174	0.175	3.00	0.282	pCi/g	09/19/21 19:37	10/05/21 18:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.3*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:07*	*1*
Y Carrier	*101*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:07*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.211	U	0.212	0.212	1.00	0.352	pCi/g	09/19/21 15:41	09/20/21 22:55	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00594	U	0.0359	0.0359	1.00	0.0892	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	0.00892	U	0.0240	0.0240	1.00	0.0576	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*71.8*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0973		0.0727	0.0731	1.00	0.0961	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.00931	U	0.0251	0.0251	1.00	0.0601	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	0.224		0.0938	0.0956	1.00	0.0558	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.8*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.234	U	0.774	0.774	5.00	1.36	pCi/g	09/24/21 08:07	09/28/21 06:06	1

Client Sample ID: FSS-128-082421

Lab Sample ID: 160-43195-14

Date Collected: 08/24/21 08:15

Matrix: Solid

Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.183	U	0.192	0.193		0.253	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Bismuth-212	-0.0333	U	0.557	0.557		1.02	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Bismuth-214	**0.263**		0.111	0.114		0.117	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Lead-212	**0.299**		0.0760	0.0849		0.0952	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Lead-214	**0.324**		0.0952	0.101		0.0989	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Potassium-40	**3.57**		0.809	0.885		0.637	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Radium-226	**0.263**		0.111	0.114	1.00	0.117	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Thorium-232	0.183	U	0.192	0.193		0.253	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Americium-241	-0.0585	U	0.167	0.167		0.286	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Cesium-137	**0.0797**		0.0290	0.0301		0.0202	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Cobalt-60	0.0213	U	0.0453	0.0453		0.0549	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Europium-152	0.0494	U	0.103	0.103		0.149	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Europium-154	0.0407	U	0.0711	0.0712		0.104	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Europium-155	0.0542	U	0.109	0.109		0.303	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Sodium-22	0.0103	U	0.0275	0.0276		0.0519	pCi/g	09/02/21 09:49	09/28/21 22:12	1
Zinc-65	0.000	U	0.0134	0.0134		0.194	pCi/g	09/02/21 09:49	09/28/21 22:12	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.730	U	0.956	0.959	5.00	1.65	pCi/g	09/20/21 14:05	09/25/21 20:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*83.7*		*40 - 110*	*09/20/21 14:05*	*09/25/21 20:07*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.30	U	1.81	1.82	5.00	2.61	pCi/g	09/12/21 17:46	09/28/21 00:08	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*71.8*		*30 - 110*	*09/12/21 17:46*	*09/28/21 00:08*	*1*

Client Sample ID: FSS-128-082421

Lab Sample ID: 160-43195-14

Date Collected: 08/24/21 08:15

Matrix: Solid

Date Received: 08/25/21 13:20

Percent Solids: 93.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**11**		0.23	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**17**	**J**	20	6.6	ug/Kg	☼	09/18/21 15:00	09/19/21 15:18	1

Client Sample ID: FSS-129-082421

Date Collected: 08/24/21 08:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-15

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0271	U J	0.147	0.147	3.00	0.265	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.4*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0304	U	0.187	0.187	1.00	0.345	pCi/g	09/19/21 15:41	09/20/21 23:18	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0448	U	0.0539	0.0540	1.00	0.0849	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	0.00299	U	0.0255	0.0255	1.00	0.0739	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*61.4*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.185**		0.0880	0.0893	1.00	0.0327	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0135	U	0.0266	0.0266	1.00	0.0406	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.283**		0.109	0.111	1.00	0.0326	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*65.9*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.183	U	0.657	0.657	5.00	1.15	pCi/g	09/24/21 08:07	09/28/21 06:28	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.325**		0.178	0.181		0.208	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Bismuth-212	0.297	U	0.535	0.536		0.932	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Bismuth-214	0.126	U	0.0663	0.0674		0.267	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Lead-212	**0.316**		0.0770	0.0836		0.0875	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Lead-214	**0.264**		0.0986	0.102		0.133	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Potassium-40	**4.36**		0.881	0.980		0.342	pCi/g	09/02/21 09:49	09/28/21 23:22	1

Client Sample ID: FSS-129-082421

Lab Sample ID: 160-43195-15
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.126	U	0.0663	0.0674	1.00	0.267	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Thorium-232	**0.325**		0.178	0.181		0.208	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Americium-241	0.0654	U	0.155	0.155		0.265	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Cesium-137	0.0334	U	0.0621	0.0622		0.107	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Cobalt-60	0.000	U	0.0180	0.0180		0.0339	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Europium-152	0.0915	U	0.148	0.148		0.170	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Europium-154	0.100	U	0.0928	0.0934		0.105	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Europium-155	-0.0929	U	0.316	0.316		0.538	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Sodium-22	-0.0148	U	0.0444	0.0445		0.0818	pCi/g	09/02/21 09:49	09/28/21 23:22	1
Zinc-65	0.0514	U	0.0969	0.0970		0.170	pCi/g	09/02/21 09:49	09/28/21 23:22	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.948	U	1.05	1.06	5.00	1.80	pCi/g	09/20/21 14:05	09/25/21 21:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*70.9*		*40 - 110*	*09/20/21 14:05*	*09/25/21 21:14*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.643	U	2.18	2.18	5.00	3.37	pCi/g	09/12/21 17:46	09/28/21 00:41	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*61.4*		*30 - 110*	*09/12/21 17:46*	*09/28/21 00:41*	*1*

Client Sample ID: FSS-129-082421

Lab Sample ID: 160-43195-15
Date Collected: 08/24/21 08:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**11**		0.23	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**13**	**J**	20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 15:20	1

Client Sample ID: FSS-130-082421

Lab Sample ID: 160-43195-16
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0500	U J	0.121	0.121	3.00	0.214	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Client Sample ID: FSS-130-082421

Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-16

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.5		40 - 110	09/19/21 19:37	10/05/21 18:13	1
Y Carrier	98.7		40 - 110	09/19/21 19:37	10/05/21 18:13	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0522	U	0.194	0.194	1.00	0.356	pCi/g	09/19/21 15:41	09/20/21 23:40	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0340	U	0.0387	0.0388	1.00	0.0545	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	0.00243	U	0.0298	0.0298	1.00	0.0766	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	83.4		30 - 110	09/11/21 11:55	09/20/21 20:54	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.236**		0.0956	0.0976	1.00	0.0601	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0121	U	0.0237	0.0237	1.00	0.0363	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.233**		0.0932	0.0951	1.00	0.0291	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	68.3		30 - 110	09/12/21 17:44	09/20/21 11:59	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.219	U	0.750	0.750	5.00	1.36	pCi/g	09/24/21 08:07	09/28/21 06:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.251**		0.185	0.186		0.197	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Bismuth-212	0.305	U	0.494	0.495		0.848	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Bismuth-214	0.0960	U	0.104	0.104		0.169	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Lead-212	**0.395**		0.0636	0.0810		0.0547	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Lead-214	**0.363**		0.0658	0.0755		0.0612	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Potassium-40	**3.93**		0.706	0.809		0.243	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Radium-226	0.0960	U	0.104	0.104	1.00	0.169	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Thorium-232	**0.251**		0.185	0.186		0.197	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Americium-241	-0.0566	U	0.124	0.124		0.211	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Cesium-137	0.000	U	0.0138	0.0138		0.0649	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Cobalt-60	-0.0535	U	0.0842	0.0844		0.0901	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Europium-152	0.0537	U	0.0965	0.0966		0.117	pCi/g	09/02/21 09:49	09/28/21 23:23	1

Client Sample ID: FSS-130-082421

Lab Sample ID: 160-43195-16
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	-0.0326	U	0.0545	0.0546		0.0929	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Europium-155	-0.0726	U	0.235	0.235		0.400	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Sodium-22	-0.0137	U	0.0322	0.0322		0.0582	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Zinc-65	0.000	U	0.0270	0.0270		0.195	pCi/g	09/02/21 09:49	09/28/21 23:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.50	U	1.03	1.04	5.00	1.74	pCi/g	09/20/21 14:05	09/25/21 22:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*82.1*		*40 - 110*	*09/20/21 14:05*	*09/25/21 22:21*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.875	U	1.48	1.48	5.00	2.14	pCi/g	09/12/21 17:46	09/28/21 01:15	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.4*		*30 - 110*	*09/12/21 17:46*	*09/28/21 01:15*	*1*

Client Sample ID: FSS-130-082421

Lab Sample ID: 160-43195-16
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.8		0.22	0.013	mg/Kg	☼	09/16/21 07:48	09/16/21 21:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	280		19	6.3	ug/Kg	☼	09/18/21 15:00	09/19/21 15:23	1

Client Sample ID: FSS-131-082421

Lab Sample ID: 160-43195-17
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.144	U J	0.152	0.152	3.00	0.253	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.7*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Client Sample ID: FSS-131-082421

Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-17

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0496	U	0.215	0.215	1.00	0.408	pCi/g	09/20/21 15:14	09/27/21 23:16	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00469	U	0.00649	0.00651	1.00	0.0525	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	0.00469	U	0.0195	0.0195	1.00	0.0525	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.8*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.226**		0.0907	0.0926	1.00	0.0517	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-235/236	0.00862	U	0.0232	0.0232	1.00	0.0556	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-238	**0.313**		0.105	0.108	1.00	0.0276	pCi/g	09/12/21 17:44	09/20/21 11:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.7*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:58*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.251	U	0.667	0.667	5.00	1.16	pCi/g	09/24/21 08:07	09/28/21 07:14	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.365**		0.258	0.260		0.294	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Bismuth-212	0.337	U	0.686	0.687		1.19	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Bismuth-214	**0.313**		0.110	0.114		0.117	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Lead-212	**0.365**		0.0835	0.0954		0.0954	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Lead-214	**0.356**		0.103	0.109		0.115	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Potassium-40	**4.79**		0.997	1.11		0.738	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Radium-226	**0.313**		0.110	0.114	1.00	0.117	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Thorium-232	**0.365**		0.258	0.260		0.294	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Americium-241	0.0258	U	0.167	0.167		0.289	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Cesium-137	0.0219	U	0.0446	0.0446		0.0783	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Cobalt-60	-0.00297	U	0.0543	0.0543		0.0636	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Europium-152	0.0652	U	0.0370	0.0376		0.182	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Europium-154	0.0378	U	0.0739	0.0740		0.131	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Europium-155	0.0337	U	0.0958	0.0958		0.429	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Sodium-22	0.0164	U	0.0331	0.0331		0.0601	pCi/g	09/02/21 09:49	09/28/21 23:23	1
Zinc-65	0.000	U	0.0312	0.0312		0.224	pCi/g	09/02/21 09:49	09/28/21 23:23	1

Client Sample ID: FSS-131-082421

Lab Sample ID: 160-43195-17
Matrix: Solid
Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.276	U	0.875	0.875	5.00	1.55	pCi/g	09/20/21 14:05	09/25/21 23:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.7*		*40 - 110*	*09/20/21 14:05*	*09/25/21 23:28*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.992	U	1.50	1.51	5.00	2.47	pCi/g	09/12/21 17:46	09/28/21 01:48	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*75.8*		*30 - 110*	*09/12/21 17:46*	*09/28/21 01:48*	*1*

Client Sample ID: FSS-131-082421

Lab Sample ID: 160-43195-17
Matrix: Solid
Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20
Percent Solids: 93.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.2		0.23	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	890		19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 15:25	1

Client Sample ID: FSS-132-082421

Lab Sample ID: 160-43195-18
Matrix: Solid
Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.118	U J	0.157	0.158	3.00	0.268	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*85.5*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*
Y Carrier	*100*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0798	U	0.220	0.220	1.00	0.389	pCi/g	09/20/21 15:14	09/27/21 23:39	1

Client Sample ID: FSS-132-082421

Date Collected: 08/24/21 11:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-18

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00240	U	0.00469	0.00470	1.00	0.0464	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	0.000	U	0.00470	0.00470	1.00	0.0288	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*70.9*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.178**		0.0851	0.0864	1.00	0.0661	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-235/236	0.0154	U	0.0357	0.0357	1.00	0.0762	pCi/g	09/12/21 17:44	09/20/21 11:59	1
Uranium-238	**0.170**		0.0826	0.0838	1.00	0.0611	pCi/g	09/12/21 17:44	09/20/21 11:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*64.4*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:59*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.308	U	0.652	0.653	5.00	1.20	pCi/g	09/24/21 08:07	09/28/21 07:36	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.0584	U	0.107	0.108		0.380	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Bismuth-212	0.363	U	0.667	0.668		1.15	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Bismuth-214	**0.417**		0.103	0.112		0.0872	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Lead-212	**0.349**		0.0681	0.0812		0.0722	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Lead-214	**0.367**		0.0955	0.103		0.0873	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Potassium-40	**3.84**		0.776	0.866		0.545	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Radium-226	**0.417**		0.103	0.112	1.00	0.0872	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Thorium-232	0.0584	U	0.107	0.108		0.380	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Americium-241	-0.0635	U	0.130	0.130		0.169	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Cesium-137	**0.0476**		0.0290	0.0294		0.0321	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Cobalt-60	0.0131	U	0.0279	0.0279		0.0488	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Europium-152	-0.00893	U	0.0159	0.0159		0.151	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Europium-154	**0.0820**		0.0689	0.0694		0.0732	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Europium-155	-0.00455	U	0.0102	0.0102		0.385	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Sodium-22	-0.0295	U	0.0491	0.0492		0.0849	pCi/g	09/02/21 09:49	09/29/21 05:30	1
Zinc-65	0.000	U	0.0168	0.0168		0.197	pCi/g	09/02/21 09:49	09/29/21 05:30	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.11	U	0.848	0.856	5.00	1.43	pCi/g	09/20/21 14:05	09/26/21 00:35	1

Client Sample ID: FSS-132-082421

Lab Sample ID: 160-43195-18
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	96.0		40 - 110	09/20/21 14:05	09/26/21 00:35	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.43	U	1.79	1.79	5.00	2.57	pCi/g	09/12/21 17:46	09/28/21 02:22	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	70.9		30 - 110	09/12/21 17:46	09/28/21 02:22	1

Client Sample ID: FSS-132-082421

Lab Sample ID: 160-43195-18
Date Collected: 08/24/21 11:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.7		0.23	0.014	mg/Kg	☼	09/16/21 07:48	09/16/21 21:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	890		19	6.1	ug/Kg	☼	09/18/21 15:00	09/19/21 15:30	1

Client Sample ID: FSS-133-082421

Lab Sample ID: 160-43195-22
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.351	J	0.184	0.186	3.00	0.282	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	85.0		40 - 110	09/19/21 19:37	10/05/21 18:12	1
Y Carrier	97.6		40 - 110	09/19/21 19:37	10/05/21 18:12	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.111	U	0.199	0.199	1.00	0.385	pCi/g	09/20/21 15:14	09/28/21 01:09	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0211	U	0.0293	0.0293	1.00	0.0474	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00212	U	0.00415	0.00415	1.00	0.0410	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	87.2		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Client Sample ID: FSS-133-082421

Date Collected: 08/24/21 14:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-22

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.496**		0.132	0.138	1.00	0.0714	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.00541	U	0.0225	0.0225	1.00	0.0606	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.395**		0.116	0.120	1.00	0.0486	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.1*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.807	U	0.784	0.789	5.00	1.31	pCi/g	09/24/21 08:07	09/28/21 09:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.759**		0.195	0.209		0.162	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-212	0.000	U	0.593	0.593		0.919	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-214	**0.640**		0.135	0.149		0.105	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-212	**0.853**		0.120	0.149		0.114	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-214	**0.685**		0.136	0.152		0.135	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Potassium-40	**6.78**		1.14	1.32		0.367	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Radium-226	**0.640**		0.135	0.149	1.00	0.105	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Thorium-232	**0.759**		0.195	0.209		0.162	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Americium-241	-0.0878	U	0.211	0.211		0.360	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cesium-137	0.00231	U	0.0582	0.0582		0.107	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cobalt-60	0.0354	U	0.0209	0.0212		0.0683	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-152	0.0997	U	0.196	0.196		0.204	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-154	0.0779	U	0.129	0.130		0.139	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-155	0.0821	U	0.183	0.183		0.574	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Sodium-22	-0.0271	U	0.0669	0.0670		0.119	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Zinc-65	0.000	U	0.0473	0.0473		0.281	pCi/g	09/02/21 11:05	09/24/21 08:51	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.68	U	1.04	1.05	5.00	1.71	pCi/g	09/20/21 14:05	09/26/21 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*79.9*		*40 - 110*	*09/20/21 14:05*	*09/26/21 05:02*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0410	U	1.67	1.67	5.00	3.00	pCi/g	09/12/21 18:00	09/27/21 16:14	1

Client Sample ID: FSS-133-082421

Lab Sample ID: 160-43195-22
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	87.2		30 - 110	09/12/21 18:00	09/27/21 16:14	1

Client Sample ID: FSS-133-082421

Lab Sample ID: 160-43195-22
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 92.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.1**		0.29	0.017	mg/Kg	☼	10/14/21 07:54	10/14/21 16:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.1	ug/Kg	☼	10/13/21 18:15	10/13/21 19:57	1

Client Sample ID: FSS-134-082421

Lab Sample ID: 160-43195-23
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.112	U J	0.149	0.149	3.00	0.253	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.9		40 - 110	09/19/21 19:37	10/05/21 18:12	1
Y Carrier	100		40 - 110	09/19/21 19:37	10/05/21 18:12	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.180	U	0.224	0.224	1.00	0.377	pCi/g	09/20/21 15:14	09/28/21 01:32	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0205	U	0.0284	0.0285	1.00	0.0459	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.000	U	0.0180	0.0180	1.00	0.0548	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.6		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.173**		0.0792	0.0805	1.00	0.0622	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.00272	U	0.0233	0.0233	1.00	0.0674	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.168**		0.0769	0.0782	1.00	0.0540	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Client Sample ID: FSS-134-082421

Date Collected: 08/24/21 14:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-23

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	*75.1*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.195	U	0.748	0.749	5.00	1.36	pCi/g	09/24/21 08:07	09/28/21 09:32	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.633**		0.180	0.191		0.152	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-212	0.337	U	0.550	0.551		0.950	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-214	**0.355**		0.117	0.123		0.111	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-212	**0.375**		0.0800	0.0930		0.0834	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-214	**0.350**		0.104	0.110		0.0900	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Potassium-40	**4.48**		0.964	1.06		0.716	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Radium-226	**0.355**		0.117	0.123	1.00	0.111	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Thorium-232	**0.633**		0.180	0.191		0.152	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Americium-241	-0.0749	U	0.181	0.182		0.310	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cesium-137	0.0266	U	0.0471	0.0471		0.0816	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cobalt-60	-0.0231	U	0.0846	0.0846		0.0984	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-152	0.150	U	0.0714	0.0731		0.158	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-154	0.0484	U	0.0533	0.0536		0.124	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-155	-0.0779	U	0.131	0.132		0.344	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Sodium-22	-0.0119	U	0.0428	0.0428		0.0799	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Zinc-65	0.0289	U	0.133	0.133		0.238	pCi/g	09/02/21 11:05	09/24/21 08:51	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.32	U	0.977	0.986	5.00	1.65	pCi/g	09/20/21 14:05	09/26/21 06:09	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	*80.6*		*40 - 110*	*09/20/21 14:05*	*09/26/21 06:09*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.25	U	1.42	1.42	5.00	2.75	pCi/g	09/12/21 18:00	09/27/21 16:48	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	*90.6*		*30 - 110*	*09/12/21 18:00*	*09/27/21 16:48*	*1*

Client Sample ID: FSS-134-082421

Lab Sample ID: 160-43195-23
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 95.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.2**		0.28	0.017	mg/Kg	☼	10/14/21 07:54	10/14/21 16:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	6.0	ug/Kg	☼	10/13/21 18:15	10/13/21 20:09	1

Client Sample ID: FSS-135-082421

Lab Sample ID: 160-43195-24
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0667	U J	0.128	0.128	3.00	0.249	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.3*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*
Y Carrier	*99.8*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0734	U	0.201	0.201	1.00	0.381	pCi/g	09/20/21 15:14	09/28/21 01:55	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0116	U	0.0242	0.0242	1.00	0.0742	pCi/g	09/11/21 12:57	09/20/21 20:52	1
Plutonium-239/240	-0.00482	U	0.00944	0.00945	1.00	0.0487	pCi/g	09/11/21 12:57	09/20/21 20:52	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*35.2*		*30 - 110*	*09/11/21 12:57*	*09/20/21 20:52*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.284**		0.150	0.151	1.00	0.126	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0177	U	0.0476	0.0476	1.00	0.114	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.335**		0.163	0.165	1.00	0.134	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*41.5*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.119	U	0.607	0.607	5.00	1.07	pCi/g	09/24/21 08:07	09/28/21 09:54	1

Client Sample ID: FSS-135-082421

Lab Sample ID: 160-43195-24

Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.361**		0.185	0.189		0.200	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-212	0.324	U	0.526	0.527		0.907	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Bismuth-214	**0.218**		0.0954	0.0979		0.131	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-212	**0.312**		0.0721	0.0822		0.0771	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Lead-214	**0.284**		0.0921	0.0966		0.113	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Potassium-40	**4.05**		0.894	0.982		0.695	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Radium-226	**0.218**		0.0954	0.0979	1.00	0.131	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Thorium-232	**0.361**		0.185	0.189		0.200	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Americium-241	-0.0491	U	0.134	0.134		0.184	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cesium-137	-0.0204	U	0.0537	0.0538		0.0947	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Cobalt-60	0.0295	U	0.0163	0.0165		0.0620	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-152	**0.181**		0.105	0.107		0.143	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-154	-0.00377	U	0.0528	0.0528		0.0938	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Europium-155	0.0294	U	0.0829	0.0830		0.308	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Sodium-22	0.0153	U	0.0421	0.0421		0.0769	pCi/g	09/02/21 11:05	09/24/21 08:51	1
Zinc-65	0.0813	U	0.130	0.130		0.223	pCi/g	09/02/21 11:05	09/24/21 08:51	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.36	U	0.940	0.950	5.00	1.58	pCi/g	09/20/21 14:05	09/26/21 07:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*83.6*		*40 - 110*	*09/20/21 14:05*	*09/26/21 07:16*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.365	U	4.07	4.07	5.00	7.48	pCi/g	09/12/21 18:00	09/27/21 17:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*35.2*		*30 - 110*	*09/12/21 18:00*	*09/27/21 17:21*	*1*

Client Sample ID: FSS-135-082421

Lab Sample ID: 160-43195-24

Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.6**		0.28	0.017	mg/Kg	☼	10/14/21 07:54	10/14/21 17:09	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg	☼	10/13/21 18:15	10/13/21 20:22	1

Client Sample ID: FSS-139-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-25

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0555	U J	0.158	0.158	3.00	0.278	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*92.6*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*
Y Carrier	*97.6*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0413	U	0.206	0.206	1.00	0.384	pCi/g	09/20/21 15:14	09/28/21 02:17	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00411	U	0.0307	0.0307	1.00	0.0724	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.00411	U	0.0248	0.0248	1.00	0.0617	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.4*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.191**		0.0842	0.0856	1.00	0.0667	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0304	U	0.0379	0.0380	1.00	0.0535	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.264**		0.0972	0.0996	1.00	0.0631	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*86.4*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.000	U	0.726	0.726	5.00	1.29	pCi/g	09/26/21 17:53	09/28/21 10:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.545**		0.130	0.141		0.0919	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Bismuth-212	0.251	U	0.883	0.883		1.56	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Bismuth-214	**0.432**		0.126	0.133		0.119	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Lead-212	**0.554**		0.0965	0.112		0.0946	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Lead-214	**0.404**		0.0955	0.104		0.115	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Potassium-40	**4.01**		0.863	0.950		0.356	pCi/g	09/02/21 11:05	09/24/21 09:23	1

Client Sample ID: FSS-139-082421

Lab Sample ID: 160-43195-25
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.432**		0.126	0.133	1.00	0.119	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Thorium-232	**0.545**		0.130	0.141		0.0919	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Americium-241	-0.0802	U	0.173	0.174		0.296	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Cesium-137	0.0349	U	0.0608	0.0609		0.105	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Cobalt-60	-0.00336	U	0.00776	0.00777		0.0883	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-152	0.0974	U	0.163	0.163		0.182	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-154	0.0615	U	0.107	0.108		0.121	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-155	-0.0930	U	0.325	0.325		0.554	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Sodium-22	0.0294	U	0.0382	0.0383		0.0640	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Zinc-65	0.0536	U	0.107	0.107		0.188	pCi/g	09/02/21 11:05	09/24/21 09:23	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.21	U	0.904	0.913	5.00	1.52	pCi/g	09/20/21 14:05	09/26/21 08:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.5*		*40 - 110*	*09/20/21 14:05*	*09/26/21 08:23*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.270	U	1.54	1.54	5.00	2.72	pCi/g	09/12/21 18:00	09/27/21 17:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.4*		*30 - 110*	*09/12/21 18:00*	*09/27/21 17:55*	*1*

Client Sample ID: FSS-139-082421

Lab Sample ID: 160-43195-25
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.9**		0.22	0.014	mg/Kg	☼	09/17/21 15:40	09/20/21 19:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**15**	**J**	19	6.3	ug/Kg	☼	09/18/21 15:00	09/19/21 16:05	1

Client Sample ID: FSS-140-082421

Lab Sample ID: 160-43195-26
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0734	U J	0.173	0.173	3.00	0.302	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Client Sample ID: FSS-140-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-26

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	86.0		40 - 110	09/19/21 19:37	10/05/21 18:13	1
Y Carrier	98.3		40 - 110	09/19/21 19:37	10/05/21 18:13	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0298	U	0.219	0.219	1.00	0.413	pCi/g	09/20/21 15:14	09/28/21 02:40	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0175	U	0.0317	0.0317	1.00	0.0890	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.0175	U	0.0115	0.0115	1.00	0.0664	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	106		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.215**		0.0886	0.0903	1.00	0.0803	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0481	U	0.0498	0.0500	1.00	0.0720	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.250**		0.0886	0.0910	1.00	0.0393	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	82.3		30 - 110	09/12/21 17:59	09/20/21 11:34	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0632	U	0.732	0.733	5.00	1.30	pCi/g	09/26/21 17:53	09/28/21 11:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.519**		0.128	0.138		0.0607	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Bismuth-212	0.398	U	0.710	0.711		1.22	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Bismuth-214	**0.252**		0.0891	0.0927		0.0897	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Lead-212	**0.335**		0.0589	0.0726		0.0531	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Lead-214	**0.304**		0.0692	0.0758		0.0868	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Potassium-40	**3.35**		0.646	0.728		0.240	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Radium-226	**0.252**		0.0891	0.0927	1.00	0.0897	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Thorium-232	**0.519**		0.128	0.138		0.0607	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Americium-241	0.00865	U	0.111	0.111		0.193	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Cesium-137	0.0293	U	0.0463	0.0464		0.0792	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Cobalt-60	-0.0471	U	0.0745	0.0747		0.0802	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Europium-152	0.0776	U	0.163	0.163		0.263	pCi/g	09/02/21 11:05	09/24/21 09:25	1

Client Sample ID: FSS-140-082421

Lab Sample ID: 160-43195-26
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0102	U	0.0479	0.0479		0.0837	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Europium-155	0.0553	U	0.103	0.103		0.176	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Sodium-22	0.0135	U	0.0241	0.0242		0.0429	pCi/g	09/02/21 11:05	09/24/21 09:25	1
Zinc-65	0.000	U	0.0265	0.0265		0.146	pCi/g	09/02/21 11:05	09/24/21 09:25	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.46**		1.25	1.28	5.00	2.06	pCi/g	09/20/21 14:05	09/26/21 09:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*68.2*		*40 - 110*	*09/20/21 14:05*	*09/26/21 09:30*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.109	U	1.37	1.37	5.00	2.48	pCi/g	09/12/21 18:00	09/27/21 18:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*106*		*30 - 110*	*09/12/21 18:00*	*09/27/21 18:28*	*1*

Client Sample ID: FSS-140-082421

Lab Sample ID: 160-43195-26
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.5**		0.28	0.017	mg/Kg	☼	09/17/21 15:40	09/20/21 19:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 16:07	1

Client Sample ID: FSS-141-082421

Lab Sample ID: 160-43195-27
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0615	U J	0.157	0.157	3.00	0.277	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.1*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Client Sample ID: FSS-141-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-27

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0452	U	0.205	0.205	1.00	0.385	pCi/g	09/20/21 15:14	09/28/21 03:02	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0141	U	0.0339	0.0339	1.00	0.0706	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00235	U	0.00462	0.00462	1.00	0.0456	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.4*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.143**		0.0728	0.0737	1.00	0.0650	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.00808	U	0.0218	0.0218	1.00	0.0522	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.270**		0.0961	0.0987	1.00	0.0535	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.3*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.286	U	0.755	0.756	5.00	1.31	pCi/g	09/26/21 17:53	09/28/21 11:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.317**		0.146	0.150		0.174	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Bismuth-212	-0.0663	U	0.603	0.603		1.09	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Bismuth-214	**0.293**		0.0890	0.0939		0.0842	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Lead-212	**0.255**		0.0664	0.0739		0.0787	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Lead-214	**0.261**		0.0709	0.0757		0.0558	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Potassium-40	**2.58**		0.816	0.856		0.778	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Radium-226	**0.293**		0.0890	0.0939	1.00	0.0842	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Thorium-232	**0.317**		0.146	0.150		0.174	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Americium-241	0.0244	U	0.141	0.141		0.243	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Cesium-137	0.00343	U	0.0454	0.0454		0.0831	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Cobalt-60	0.0279	U	0.0207	0.0209		0.0294	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Europium-152	0.0111	U	0.0226	0.0227		0.141	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Europium-154	0.0421	U	0.0880	0.0881		0.114	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Europium-155	0.0607	U	0.187	0.187		0.320	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Sodium-22	-0.0219	U	0.0393	0.0393		0.0692	pCi/g	09/02/21 11:05	09/24/21 09:24	1
Zinc-65	-0.0716	U	0.127	0.127		0.237	pCi/g	09/02/21 11:05	09/24/21 09:24	1

Client Sample ID: FSS-141-082421

Lab Sample ID: 160-43195-27
Matrix: Solid
Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.74		0.933	0.950	5.00	1.52	pCi/g	09/20/21 14:05	09/26/21 10:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*91.0*		*40 - 110*	*09/20/21 14:05*	*09/26/21 10:37*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.124	U	1.57	1.57	5.00	2.83	pCi/g	09/12/21 18:00	09/27/21 19:02	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.4*		*30 - 110*	*09/12/21 18:00*	*09/27/21 19:02*	*1*

Client Sample ID: FSS-141-082421

Lab Sample ID: 160-43195-27
Matrix: Solid
Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20
Percent Solids: 93.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.8		0.27	0.016	mg/Kg	☼	09/17/21 15:40	09/20/21 20:02	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 16:15	1

Client Sample ID: FSS-339-082421

Lab Sample ID: 160-43195-28
Matrix: Solid
Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.158	U J	0.152	0.153	3.00	0.252	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*90.1*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*
Y Carrier	*99.1*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:13*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0246	U	0.214	0.214	1.00	0.398	pCi/g	09/20/21 15:14	09/28/21 03:25	1

Client Sample ID: FSS-339-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-28

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00537	U	0.0213	0.0213	1.00	0.0509	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.00895	U	0.0208	0.0208	1.00	0.0443	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*97.9*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.298**		0.101	0.104	1.00	0.0631	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0392	U	0.0413	0.0414	1.00	0.0506	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.352**		0.108	0.112	1.00	0.0560	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.9*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.265	U	0.592	0.592	5.00	1.02	pCi/g	09/26/21 17:53	09/28/21 12:20	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.447**		0.122	0.130		0.139	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Bismuth-212	-0.190	U	0.685	0.685		1.21	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Bismuth-214	**0.423**		0.101	0.110		0.0787	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Lead-212	**0.536**		0.0819	0.106		0.0722	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Lead-214	**0.350**		0.110	0.115		0.110	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Potassium-40	**5.31**		0.934	1.07		0.609	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Radium-226	**0.423**		0.101	0.110	1.00	0.0787	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Thorium-232	**0.447**		0.122	0.130		0.139	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Americium-241	0.00977	U	0.120	0.120		0.168	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Cesium-137	-0.0367	U	0.0618	0.0619		0.106	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Cobalt-60	-0.0134	U	0.101	0.101		0.0843	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Europium-152	**0.215**		0.0792	0.0822		0.159	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Europium-154	0.0844	U	0.0927	0.0931		0.0906	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Europium-155	-0.0602	U	0.170	0.170		0.291	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Sodium-22	0.00977	U	0.0361	0.0362		0.0674	pCi/g	09/02/21 11:05	09/24/21 09:26	1
Zinc-65	-0.0935	U	0.152	0.152		0.259	pCi/g	09/02/21 11:05	09/24/21 09:26	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.17	U	1.02	1.03	5.00	1.73	pCi/g	09/20/21 14:05	09/26/21 11:44	1

Client Sample ID: FSS-339-082421

Lab Sample ID: 160-43195-28
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	80.8		40 - 110	09/20/21 14:05	09/26/21 11:44	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.14	U	1.32	1.33	5.00	2.56	pCi/g	09/12/21 18:00	09/27/21 19:35	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	97.9		30 - 110	09/12/21 18:00	09/27/21 19:35	1

Client Sample ID: FSS-339-082421

Lab Sample ID: 160-43195-28
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.5		0.24	0.014	mg/Kg	☼	09/17/21 15:40	09/20/21 20:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	J	19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 16:17	1

Client Sample ID: FSS-340-082421

Lab Sample ID: 160-43195-29
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.109	U J	0.140	0.140	3.00	0.275	pCi/g	09/19/21 19:37	10/05/21 18:13	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	84.2		40 - 110	09/19/21 19:37	10/05/21 18:13	1
Y Carrier	97.9		40 - 110	09/19/21 19:37	10/05/21 18:13	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0190	U	0.215	0.215	1.00	0.393	pCi/g	09/20/21 15:14	09/28/21 03:48	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0438	U	0.0386	0.0388	1.00	0.0446	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00598	U	0.0187	0.0187	1.00	0.0627	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	104		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Client Sample ID: FSS-340-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-29

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.264**		0.0948	0.0973	1.00	0.0486	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0108	U	0.0211	0.0212	1.00	0.0324	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.303**		0.100	0.103	1.00	0.0260	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*78.4*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.312	U	0.630	0.631	5.00	1.15	pCi/g	09/26/21 17:53	09/28/21 12:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.469**		0.117	0.126		0.0672	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Bismuth-212	**0.609**		0.396	0.401		0.425	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Bismuth-214	**0.389**		0.0966	0.104		0.102	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Lead-212	**0.369**		0.0673	0.0820		0.0657	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Lead-214	**0.457**		0.0866	0.0983		0.0937	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Potassium-40	**3.81**		0.785	0.873		0.579	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Radium-226	**0.389**		0.0966	0.104	1.00	0.102	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Thorium-232	**0.469**		0.117	0.126		0.0672	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Americium-241	0.107	U	0.115	0.116		0.192	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Cesium-137	0.00324	U	0.0449	0.0449		0.0815	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Cobalt-60	0.0250	U	0.0185	0.0187		0.0263	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Europium-152	-0.0371	U	0.0844	0.0845		0.145	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Europium-154	0.0601	U	0.0759	0.0762		0.0840	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Europium-155	-0.000827	U	0.134	0.134		0.371	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Sodium-22	-0.0172	U	0.0422	0.0422		0.0756	pCi/g	09/02/21 11:05	09/24/21 09:57	1
Zinc-65	-0.0525	U	0.134	0.134		0.233	pCi/g	09/02/21 11:05	09/24/21 09:57	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.941	U	0.864	0.869	5.00	1.47	pCi/g	09/20/21 14:05	09/26/21 12:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.6*		*40 - 110*	*09/20/21 14:05*	*09/26/21 12:51*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.162	U	1.48	1.48	5.00	2.68	pCi/g	09/12/21 18:00	09/27/21 20:09	1

Client Sample ID: FSS-340-082421

Lab Sample ID: 160-43195-29
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	104		30 - 110	09/12/21 18:00	09/27/21 20:09	1

Client Sample ID: FSS-340-082421

Lab Sample ID: 160-43195-29
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.5		0.28	0.017	mg/Kg	☼	09/17/21 15:40	09/20/21 20:09	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	12	J	21	6.7	ug/Kg	☼	09/18/21 15:00	09/19/21 16:20	1

Client Sample ID: FSS-341-082421

Lab Sample ID: 160-43195-30
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.153	U	0.195	0.195	3.00	0.330	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.1		40 - 110	09/20/21 10:28	10/04/21 17:18	1
Y Carrier	99.4		40 - 110	09/20/21 10:28	10/04/21 17:18	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0615	U	0.217	0.217	1.00	0.389	pCi/g	09/20/21 15:14	09/28/21 04:10	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00200	U	0.00391	0.00391	1.00	0.0386	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00200	U	0.00392	0.00392	1.00	0.0387	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	86.1		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.231		0.0891	0.0911	1.00	0.0489	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0434		0.0426	0.0427	1.00	0.0326	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	0.287		0.0981	0.101	1.00	0.0261	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Client Sample ID: FSS-341-082421

Date Collected: 08/24/21 13:45
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-30

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	*78.9*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.570	U	0.850	0.852	5.00	1.45	pCi/g	09/26/21 17:53	09/28/21 13:05	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.589**		0.167	0.177		0.0948	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Bismuth-212	-0.0350	U	0.757	0.757		1.38	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Bismuth-214	**0.431**		0.131	0.138		0.125	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Lead-212	**0.388**		0.0891	0.0976		0.102	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Lead-214	**0.410**		0.101	0.109		0.139	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Potassium-40	**4.34**		0.912	1.01		0.368	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Radium-226	**0.431**		0.131	0.138	1.00	0.125	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Thorium-232	**0.589**		0.167	0.177		0.0948	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Americium-241	-0.0683	U	0.167	0.167		0.286	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Cesium-137	-0.00447	U	0.0601	0.0601		0.110	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Cobalt-60	0.0190	U	0.0141	0.0142		0.0684	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Europium-152	0.117	U	0.120	0.121		0.199	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Europium-154	0.0669	U	0.122	0.122		0.142	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Europium-155	0.0340	U	0.0975	0.0975		0.521	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Sodium-22	**0.0575**		0.0325	0.0330		0.0353	pCi/g	09/02/21 11:05	09/24/21 09:58	1
Zinc-65	0.0330	U	0.136	0.136		0.246	pCi/g	09/02/21 11:05	09/24/21 09:58	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.10	U	0.991	0.997	5.00	1.70	pCi/g	09/20/21 14:05	09/26/21 13:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	*83.2*		*40 - 110*	*09/20/21 14:05*	*09/26/21 13:58*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.736	U	1.55	1.55	5.00	2.87	pCi/g	09/12/21 18:00	09/27/21 20:42	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	*86.1*		*30 - 110*	*09/12/21 18:00*	*09/27/21 20:42*	*1*

Client Sample ID: FSS-341-082421

Lab Sample ID: 160-43195-30
Date Collected: 08/24/21 13:45
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 92.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.9**		0.26	0.016	mg/Kg	☼	09/17/21 15:40	09/20/21 20:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**7.0**	**J**	19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 16:22	1

Client Sample ID: FSS-142-082421

Lab Sample ID: 160-43195-31
Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.193	U	0.160	0.161	3.00	0.326	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.9*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0798	U	0.225	0.225	1.00	0.400	pCi/g	09/20/21 15:14	09/28/21 04:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00579	U	0.0156	0.0156	1.00	0.0374	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.000	U	0.00379	0.00379	1.00	0.0232	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.8*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.316**		0.102	0.106	1.00	0.0665	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	0.0252	U	0.0350	0.0350	1.00	0.0565	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.235**		0.0891	0.0911	1.00	0.0664	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.5*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:37*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.894	U	0.681	0.688	5.00	1.11	pCi/g	09/26/21 17:53	09/28/21 13:28	1

Client Sample ID: FSS-142-082421

Lab Sample ID: 160-43195-31

Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.414**		0.161	0.166		0.144	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Bismuth-212	0.400	U	0.762	0.763		1.31	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Bismuth-214	**0.329**		0.0909	0.0969		0.0867	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Lead-212	**0.367**		0.0651	0.0800		0.0661	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Lead-214	**0.315**		0.0898	0.0953		0.0847	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Potassium-40	**3.66**		0.677	0.770		0.241	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Radium-226	**0.329**		0.0909	0.0969	1.00	0.0867	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Thorium-232	**0.414**		0.161	0.166		0.144	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Americium-241	-0.0686	U	0.149	0.150		0.254	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Cesium-137	**0.0949**		0.0284	0.0300		0.0163	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Cobalt-60	-0.0108	U	0.0514	0.0514		0.0596	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-152	0.149	U	0.145	0.146		0.348	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-154	**0.104**		0.0447	0.0460		0.0890	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-155	-0.00441	U	0.00964	0.00965		0.371	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Sodium-22	0.00834	U	0.0308	0.0308		0.0575	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Zinc-65	0.00843	U	0.106	0.106		0.192	pCi/g	09/02/21 11:05	09/24/21 09:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.890	U	0.963	0.967	5.00	1.65	pCi/g	09/20/21 14:05	09/26/21 15:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*82.9*		*40 - 110*	*09/20/21 14:05*	*09/26/21 15:05*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.505	U	1.56	1.56	5.00	2.89	pCi/g	09/12/21 18:00	09/27/21 21:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*88.8*		*30 - 110*	*09/12/21 18:00*	*09/27/21 21:16*	*1*

Client Sample ID: FSS-142-082421

Lab Sample ID: 160-43195-31

Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 94.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.1**		0.26	0.016	mg/Kg	☼	09/17/21 15:40	09/20/21 20:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**53**		18	6.0	ug/Kg	☼	09/18/21 15:00	09/19/21 16:25	1

Client Sample ID: FSS-143-082421

Date Collected: 08/24/21 13:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-32

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0884	U	0.162	0.163	3.00	0.283	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.9*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:18*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0286	U	0.203	0.203	1.00	0.375	pCi/g	09/20/21 15:14	09/28/21 04:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0219	U	0.0217	0.0218	1.00	0.0805	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.0199	U	0.0276	0.0276	1.00	0.0860	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.1*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.242**		0.0926	0.0947	1.00	0.0716	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	0.00785	U	0.0211	0.0211	1.00	0.0506	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.279**		0.0962	0.0989	1.00	0.0519	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.6*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:37*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.219	U	0.579	0.580	5.00	1.01	pCi/g	09/26/21 17:53	09/28/21 13:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.299**		0.125	0.129		0.106	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Bismuth-212	0.000	U	0.163	0.163		1.13	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Bismuth-214	**0.377**		0.0909	0.0986		0.0683	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Lead-212	**0.377**		0.115	0.125		0.170	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Lead-214	**0.419**		0.0959	0.105		0.0703	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Potassium-40	**3.26**		0.784	0.850		0.633	pCi/g	09/02/21 11:05	09/24/21 09:59	1

Client Sample ID: FSS-143-082421

Lab Sample ID: 160-43195-32
Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.377**		0.0909	0.0986	1.00	0.0683	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Thorium-232	**0.299**		0.125	0.129		0.106	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Americium-241	-0.0573	U	0.150	0.150		0.257	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Cesium-137	**0.147**		0.0591	0.0610		0.0810	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Cobalt-60	0.0263	U	0.0466	0.0466		0.0549	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-152	0.0454	U	0.128	0.128		0.152	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-154	0.0734	U	0.0544	0.0549		0.0904	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Europium-155	-0.0733	U	0.114	0.115		0.334	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Sodium-22	**0.0354**		0.0231	0.0234		0.0290	pCi/g	09/02/21 11:05	09/24/21 09:59	1
Zinc-65	-0.00391	U	0.0409	0.0409		0.217	pCi/g	09/02/21 11:05	09/24/21 09:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	-0.0142	U	1.01	1.01	5.00	1.82	pCi/g	09/20/21 14:05	09/26/21 16:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*74.9*		*40 - 110*	*09/20/21 14:05*	*09/26/21 16:12*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.02	U	1.54	1.54	5.00	2.95	pCi/g	09/12/21 18:00	09/27/21 21:49	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.1*		*30 - 110*	*09/12/21 18:00*	*09/27/21 21:49*	*1*

Client Sample ID: FSS-143-082421

Lab Sample ID: 160-43195-32
Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 93.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.7**		0.26	0.016	mg/Kg	☼	09/17/21 15:40	09/20/21 20:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**42**		21	6.7	ug/Kg	☼	09/18/21 15:00	09/19/21 16:27	1

Client Sample ID: FSS-144-082421

Lab Sample ID: 160-43195-33
Date Collected: 08/24/21 13:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.137	U	0.187	0.188	3.00	0.319	pCi/g	09/20/21 10:28	10/04/21 17:18	1

Client Sample ID: FSS-144-082421

Date Collected: 08/24/21 13:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-33

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	75.8		40 - 110	09/20/21 10:28	10/04/21 17:18	1
Y Carrier	99.8		40 - 110	09/20/21 10:28	10/04/21 17:18	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0278	U	0.219	0.219	1.00	0.399	pCi/g	09/20/21 15:14	09/28/21 05:18	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00450	U	0.00623	0.00624	1.00	0.0504	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00450	U	0.00624	0.00625	1.00	0.0504	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	79.9		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.358**		0.104	0.108	1.00	0.0378	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	0.0170	U	0.0274	0.0274	1.00	0.0471	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.396**		0.111	0.115	1.00	0.0555	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	88.9		30 - 110	09/12/21 17:59	09/20/21 11:37	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.257	U	0.752	0.752	5.00	1.31	pCi/g	09/26/21 17:53	09/28/21 14:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.487**		0.123	0.132		0.0777	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Bismuth-212	0.177	U	0.462	0.462		0.825	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Bismuth-214	**0.353**		0.106	0.112		0.0898	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Lead-212	**0.385**		0.0792	0.0930		0.0865	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Lead-214	**0.308**		0.0871	0.0926		0.106	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Potassium-40	**3.55**		0.819	0.893		0.658	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Radium-226	**0.353**		0.106	0.112	1.00	0.0898	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Thorium-232	**0.487**		0.123	0.132		0.0777	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Americium-241	-0.0587	U	0.132	0.132		0.181	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Cesium-137	0.0281	U	0.0457	0.0458		0.0787	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Cobalt-60	-0.0377	U	0.0636	0.0637		0.103	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Europium-152	0.0352	U	0.0450	0.0452		0.147	pCi/g	09/02/21 11:05	09/24/21 10:01	1

Client Sample ID: FSS-144-082421

Lab Sample ID: 160-43195-33

Date Collected: 08/24/21 13:15

Matrix: Solid

Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0612	U	0.0748	0.0750		0.0989	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Europium-155	0.0392	U	0.0974	0.0975		0.225	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Sodium-22	-0.0158	U	0.0478	0.0479		0.0868	pCi/g	09/02/21 11:05	09/24/21 10:01	1
Zinc-65	-0.0595	U	0.139	0.139		0.243	pCi/g	09/02/21 11:05	09/24/21 10:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.13	U	0.936	0.944	5.00	1.59	pCi/g	09/20/21 14:05	09/26/21 17:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*84.2*		*40 - 110*	*09/20/21 14:05*	*09/26/21 17:19*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.890	U	1.75	1.75	5.00	3.29	pCi/g	09/12/21 18:00	09/27/21 22:23	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.9*		*30 - 110*	*09/12/21 18:00*	*09/27/21 22:23*	*1*

Client Sample ID: FSS-144-082421

Lab Sample ID: 160-43195-33

Date Collected: 08/24/21 13:15

Matrix: Solid

Date Received: 08/25/21 13:20

Percent Solids: 94.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.2		0.22	0.013	mg/Kg	☼	09/17/21 15:40	09/20/21 20:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	29		20	6.5	ug/Kg	☼	09/18/21 15:00	09/19/21 16:30	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549134/1-A
Matrix: Solid
Analysis Batch: 550156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549134

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/16/21 07:48	09/16/21 20:12	1

Lab Sample ID: LCS 280-549134/2-A
Matrix: Solid
Analysis Batch: 550156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.7		mg/Kg		94	84 - 118

Lab Sample ID: 160-43195-1 MS
Matrix: Solid
Analysis Batch: 550156

Client Sample ID: FSS-115-082421
Prep Type: Total/NA
Prep Batch: 549134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	11		16.7	29.0		mg/Kg	☼	106	84 - 118

Lab Sample ID: 160-43195-1 MSD
Matrix: Solid
Analysis Batch: 550156

Client Sample ID: FSS-115-082421
Prep Type: Total/NA
Prep Batch: 549134

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	11		19.1	30.1		mg/Kg	☼	99	84 - 118	4	20

Lab Sample ID: MB 280-553378/1-A
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 553378

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0409	J	0.30	0.018	mg/Kg		10/14/21 07:54	10/14/21 16:26	1

Lab Sample ID: LCS 280-553378/2-A
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.9		mg/Kg		95	84 - 118

Lab Sample ID: 160-43195-22 MS
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-133-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3.1		19.3	21.0		mg/Kg	☼	93	84 - 118

Lab Sample ID: 160-43195-22 MSD
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-133-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.1		19.1	20.2		mg/Kg	☼	90	84 - 118	4	20

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 160-43195-23 MS
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-134-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead	1.2		17.6	18.3		mg/Kg	☼	97	84 - 118		

Lab Sample ID: 160-43195-23 MSD
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-134-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.2		18.4	19.0		mg/Kg	☼	96	84 - 118	3	20

Lab Sample ID: 160-43195-24 MS
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-135-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead	1.6		17.6	18.3		mg/Kg	☼	95	84 - 118		

Lab Sample ID: 160-43195-24 MSD
Matrix: Solid
Analysis Batch: 553656

Client Sample ID: FSS-135-082421
Prep Type: Total/NA
Prep Batch: 553378

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.6		18.3	18.8		mg/Kg	☼	94	84 - 118	3	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-550158/1-A
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550158

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/18/21 15:00	09/19/21 14:25	1

Lab Sample ID: LCS 280-550158/2-A
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550158

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			333	342		ug/Kg		102	80 - 124		

Lab Sample ID: 160-43195-1 MS
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: FSS-115-082421
Prep Type: Total/NA
Prep Batch: 550158

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	170		405	581		ug/Kg	☼	102	80 - 124		

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43195-1 MSD — **Client Sample ID: FSS-115-082421**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 550342 — **Prep Batch: 550158**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	170		377	560		ug/Kg	☼	103	80 - 124	4	20

Lab Sample ID: MB 280-553410/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		10/13/21 18:15	10/14/21 12:41	1

Lab Sample ID: LCS 280-553410/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	355		ug/Kg		107	80 - 124

Lab Sample ID: LCSD 280-553410/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	348		ug/Kg		105	80 - 124	2	20

Lab Sample ID: 160-43195-22 MS — **Client Sample ID: FSS-133-082421**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	368	373		ug/Kg	☼	101	80 - 124

Lab Sample ID: 160-43195-22 MSD — **Client Sample ID: FSS-133-082421**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	368	375		ug/Kg	☼	102	80 - 124	1	20

Lab Sample ID: 160-43195-23 MS — **Client Sample ID: FSS-134-082421**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	366	370		ug/Kg	☼	101	80 - 124

Lab Sample ID: 160-43195-23 MSD — **Client Sample ID: FSS-134-082421**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 553563 — **Prep Batch: 553410**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	372	377		ug/Kg	☼	101	80 - 124	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: 160-43195-24 MS
Matrix: Solid
Analysis Batch: 553563

Client Sample ID: FSS-135-082421
Prep Type: Total/NA
Prep Batch: 553410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	14	U	397	401		ug/Kg	☼	101	80 - 124

Lab Sample ID: 160-43195-24 MSD
Matrix: Solid
Analysis Batch: 553563

Client Sample ID: FSS-135-082421
Prep Type: Total/NA
Prep Batch: 553410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	14	U	369	376		ug/Kg	☼	102	80 - 124	6	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527607/1-A
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527607

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.3002	U	0.202	0.203	3.00	0.322	pCi/g	09/18/21 16:37	09/30/21 21:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.7*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*
Y Carrier	*97.2*		*40 - 110*	*09/18/21 16:37*	*09/30/21 21:30*	*1*

Lab Sample ID: LCS 160-527607/2-A
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527607

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Strontium-90			7.61	7.718		0.803	3.00	0.281	pCi/g	101	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*87.7*		*40 - 110*
Y Carrier	*94.2*		*40 - 110*

Lab Sample ID: 160-43124-D-21-K DU
Matrix: Solid
Analysis Batch: 529523

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527607

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0339	U		0.01645	U	0.216	3.00	0.387	pCi/g			0.12	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*75.6*		*40 - 110*
Y Carrier	*95.7*		*40 - 110*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: 160-43195-10 DU
Matrix: Solid
Analysis Batch: 530399

Client Sample ID: FSS-124-082421
Prep Type: Total/NA
Prep Batch: 527618

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.116	U J		-0.02872	U J	0.166	3.00	0.305	pCi/g			1.21	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*82.6*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Lab Sample ID: MB 160-527652/1-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527652

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.01279	U	0.165	0.165	3.00	0.299	pCi/g	09/20/21 10:28	10/04/21 17:17	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.6*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*

Lab Sample ID: LCS 160-527652/2-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527652

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	7.087		0.743	3.00	0.262	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*87.5*		*40 - 110*
Y Carrier	*100*		*40 - 110*

Lab Sample ID: 160-43195-30 DU
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: FSS-341-082421
Prep Type: Total/NA
Prep Batch: 527652

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.153	U		0.09027	U	0.205	3.00	0.358	pCi/g			0.44	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*75.1*		*40 - 110*
Y Carrier	*103*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-527613/1-A
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527613

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.03303	U	0.212	0.212	1.00	0.392	pCi/g	09/19/21 15:37	09/21/21 00:56	1

Lab Sample ID: LCS 160-527613/2-A
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527613

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.61	7.084		0.850	1.00	0.390	pCi/g	93	79 - 125		

Lab Sample ID: 160-43195-2 MS
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: FSS-116-082421
Prep Type: Total/NA
Prep Batch: 527613

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.152	U	7.48	6.554		0.790	1.00	0.366	pCi/g	86	78 - 122		

Lab Sample ID: 160-43195-3 DU
Matrix: Solid
Analysis Batch: 527837

Client Sample ID: FSS-117-082421
Prep Type: Total/NA
Prep Batch: 527613

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-0.0166	U		0.1936	U	0.220	1.00	0.373	pCi/g			1.41	3

Lab Sample ID: MB 160-527614/1-A
Matrix: Solid
Analysis Batch: 528296

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527614

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.02282	U	0.180	0.180	1.00	0.335	pCi/g	09/19/21 15:41	09/20/21 18:24	1

Lab Sample ID: LCS 160-527614/2-A
Matrix: Solid
Analysis Batch: 528296

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527614

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.61	7.587		0.900	1.00	0.337	pCi/g	100	79 - 125		

Lab Sample ID: 160-43195-15 MS
Matrix: Solid
Analysis Batch: 528297

Client Sample ID: FSS-129-082421
Prep Type: Total/NA
Prep Batch: 527614

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	0.0304	U	7.55	7.329		0.896	1.00	0.427	pCi/g	97	78 - 122		

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: 160-43195-16 DU
Matrix: Solid
Analysis Batch: 528297

Client Sample ID: FSS-130-082421
Prep Type: Total/NA
Prep Batch: 527614

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.0522	U		-0.1475	U	0.223	1.00	0.443	pCi/g			1.32	3

Lab Sample ID: MB 160-527693/1-A
Matrix: Solid
Analysis Batch: 529111

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527693

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.03664	U	0.205	0.206	1.00	0.381	pCi/g	09/20/21 15:14	09/27/21 22:31	1

Lab Sample ID: LCS 160-527693/2-A
Matrix: Solid
Analysis Batch: 529111

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527693

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.60	7.083		0.839	1.00	0.382	pCi/g	93	79 - 125		

Lab Sample ID: 160-43195-32 MS
Matrix: Solid
Analysis Batch: 529111

Client Sample ID: FSS-143-082421
Prep Type: Total/NA
Prep Batch: 527693

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.0286	U	7.49	6.093		0.744	1.00	0.367	pCi/g	81	78 - 122		

Lab Sample ID: 160-43195-33 DU
Matrix: Solid
Analysis Batch: 529111

Client Sample ID: FSS-144-082421
Prep Type: Total/NA
Prep Batch: 527693

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	0.0278	U		0.03562	U	0.212	1.00	0.381	pCi/g			0.05	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526532/1-A
Matrix: Solid
Analysis Batch: 528145

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526532

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01328	U	0.0253	0.0253	1.00	0.0496	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-235/236	0.03857	U	0.0439	0.0440	1.00	0.0617	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-238	0.03093	U	0.0352	0.0353	1.00	0.0495	pCi/g	09/12/21 17:44	09/20/21 11:58	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.2*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:58*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-526532/2-A
Matrix: Solid
Analysis Batch: 528146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526532

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.959		0.761	1.00	0.0526	pCi/g	109	76 - 117		
Uranium-238			6.51	7.155		0.778	1.00	0.0625	pCi/g	110	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*71.9*		*30 - 110*

Lab Sample ID: 160-43157-D-24-J DU
Matrix: Solid
Analysis Batch: 528106

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526532

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.152			0.1454		0.0726	1.00	0.0571	pCi/g			0.12	3
Uranium-235/236	0.0393	U		0.007985	U	0.0215	1.00	0.0515	pCi/g			1.31	3
Uranium-238	0.149			0.3309		0.108	1.00	0.0413	pCi/g			2.75	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*81.0*		*30 - 110*

Lab Sample ID: MB 160-528279/1-A
Matrix: Solid
Analysis Batch: 528775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528279

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.04927	U	0.0755	0.0756	1.00	0.135	pCi/g	09/21/21 15:00	09/24/21 11:54	1
Uranium-235/236	0.01022	U	0.0425	0.0425	1.00	0.114	pCi/g	09/21/21 15:00	09/24/21 11:54	1
Uranium-238	0.1393		0.0970	0.0977	1.00	0.0918	pCi/g	09/21/21 15:00	09/24/21 11:54	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.5*		*30 - 110*	*09/21/21 15:00*	*09/24/21 11:54*	*1*

Lab Sample ID: LCS 160-528279/2-A
Matrix: Solid
Analysis Batch: 528778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528279

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	13.21		1.41	1.00	0.113	pCi/g	104	76 - 117		
Uranium-238			13.0	14.13		1.49	1.00	0.0984	pCi/g	109	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*87.0*		*30 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCSD 160-528279/3-A
Matrix: Solid
Analysis Batch: 528779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 528279

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Uranium-233/234			12.7	12.63		1.36	1.00	0.104	pCi/g	99	76 - 117	0.58	3
Uranium-238			13.0	13.04		1.39	1.00	0.111	pCi/g	100	78 - 118	1.05	3

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Uranium-232	*106*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526438/1-A
Matrix: Solid
Analysis Batch: 528127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526438

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.002080	U	0.00408	0.00408	1.00	0.0403	pCi/g	09/11/21 11:55	09/20/21 13:14	1
Plutonium-239/240	-0.002082	U	0.00408	0.00408	1.00	0.0403	pCi/g	09/11/21 11:55	09/20/21 13:14	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*84.7*		*30 - 110*	*09/11/21 11:55*	*09/20/21 13:14*	*1*

Lab Sample ID: LCS 160-526438/2-A
Matrix: Solid
Analysis Batch: 528128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526438

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	4.862		0.581	1.00	0.0634	pCi/g	94	80 - 125		
Plutonium-239/240			5.28	5.311		0.621	1.00	0.0460	pCi/g	101	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*75.5*		*30 - 110*

Lab Sample ID: 160-43157-D-24-H DU
Matrix: Solid
Analysis Batch: 528130

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526438

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0227	U		-0.02092	U	0.0131	1.00	0.0738	pCi/g			2.50	3
Plutonium-239/240	-0.00228	U		-0.006282	U	0.00713	1.00	0.0518	pCi/g			0.36	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*81.3*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: MB 160-526439/1-A
Matrix: Solid
Analysis Batch: 528231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526439

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.02059	U	0.0122	0.0123	1.00	0.0681	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.01124	U	0.0214	0.0214	1.00	0.0420	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.7*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Lab Sample ID: LCS 160-526439/2-A
Matrix: Solid
Analysis Batch: 528232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526439

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.19	5.349		0.581	1.00	0.0672	pCi/g	103	80 - 125
Plutonium-239/240	5.28	4.918		0.544	1.00	0.0432	pCi/g	93	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*108*		*30 - 110*

Lab Sample ID: MB 160-528277/1-A
Matrix: Solid
Analysis Batch: 528749

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528277

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.02778	U	0.0447	0.0447	1.00	0.0768	pCi/g	09/21/21 14:53	09/24/21 11:18	1
Plutonium-239/240	0.01192	U	0.0321	0.0321	1.00	0.0769	pCi/g	09/21/21 14:53	09/24/21 11:18	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.3*		*30 - 110*	*09/21/21 14:53*	*09/24/21 11:18*	*1*

Lab Sample ID: LCS 160-528277/2-A
Matrix: Solid
Analysis Batch: 528750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528277

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	10.4	10.46		1.16	1.00	0.0731	pCi/g	101	80 - 125
Plutonium-239/240	10.6	10.26		1.14	1.00	0.0454	pCi/g	97	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.8*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCSD 160-528277/3-A
Matrix: Solid
Analysis Batch: 528751

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 528277

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Plutonium-238			10.4	10.45		1.17	1.00	0.157	pCi/g	101	80 - 125	0.01	3
Plutonium-239/240			10.6	10.76		1.20	1.00	0.168	pCi/g	102	81 - 125	0.59	3

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Pu-242 (T)	*93.9*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-528500/1-A
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528500

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.140	U	0.911	0.919	5.00	1.50	pCi/g	09/23/21 08:54	09/27/21 09:50	1

Lab Sample ID: LCS 160-528500/2-A
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528500

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	77.77		8.75	5.00	1.48	pCi/g	92	75 - 125		

Lab Sample ID: 160-43157-B-17-F MS
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 528500

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.279	U	64.9	64.67		7.24	5.00	1.14	pCi/g	99	29 - 128		

Lab Sample ID: 160-43157-B-17-E DU
Matrix: Solid
Analysis Batch: 529104

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 528500

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.279	U		-0.7432	U	0.794	5.00	1.49	pCi/g			1.72	3

Lab Sample ID: MB 160-528698/1-A
Matrix: Solid
Analysis Batch: 529135

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528698

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.09009	U	0.794	0.794	5.00	1.40	pCi/g	09/24/21 08:07	09/28/21 02:41	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-528698/2-A
Matrix: Solid
Analysis Batch: 529135

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528698

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	84.95		9.53	5.00	1.42	pCi/g	101	75 - 125		

Lab Sample ID: 160-43195-9 MS
Matrix: Solid
Analysis Batch: 529135

Client Sample ID: FSS-123-082421
Prep Type: Total/NA
Prep Batch: 528698

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	-0.0375	U	73.4	72.31		8.13	5.00	1.25	pCi/g	99	29 - 128		

Lab Sample ID: 160-43195-9 DU
Matrix: Solid
Analysis Batch: 529135

Client Sample ID: FSS-123-082421
Prep Type: Total/NA
Prep Batch: 528698

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	-0.0375	U		0.3578	U	0.590	5.00	1.01	pCi/g			1.0	3

Lab Sample ID: MB 160-528887/1-A
Matrix: Solid
Analysis Batch: 529299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528887

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.4009	U	0.799	0.800	5.00	1.46	pCi/g	09/26/21 17:53	09/28/21 09:42	1

Lab Sample ID: LCS 160-528887/2-A
Matrix: Solid
Analysis Batch: 529299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528887

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	82.33		9.23	5.00	1.46	pCi/g	98	75 - 125		

Lab Sample ID: 160-43195-25 MS
Matrix: Solid
Analysis Batch: 529299

Client Sample ID: FSS-139-082421
Prep Type: Total/NA
Prep Batch: 528887

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.000	U	84.4	80.08		8.99	5.00	1.47	pCi/g	95	29 - 128		

Lab Sample ID: 160-43195-25 DU
Matrix: Solid
Analysis Batch: 529299

Client Sample ID: FSS-139-082421
Prep Type: Total/NA
Prep Batch: 528887

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.000	U		0.2921	U	0.663	5.00	1.14	pCi/g			0.58	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-525240/1-A
Matrix: Solid
Analysis Batch: 529305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525240

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	-0.08219	U	0.0779	0.0784		0.233	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Bismuth-212	-0.04052	U	0.600	0.600		1.11	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Bismuth-214	0.05115	U	0.0556	0.0558		0.280	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Lead-212	-0.03236	U	0.0247	0.0250		0.162	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Lead-214	0.1030		0.0697	0.0705		0.0889	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Potassium-40	-0.06300	U	0.682	0.682		0.976	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Radium-226	0.05115	U	0.0556	0.0558	1.00	0.280	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Thorium-232	-0.08219	U	0.0779	0.0784		0.233	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Americium-241	-0.03141	U	0.107	0.107		0.186	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Cesium-137	-0.01870	U	0.0248	0.0249		0.0797	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Cobalt-60	-0.004744	U	0.00439	0.00441		0.0904	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Europium-152	0.07632	U	0.123	0.123		0.113	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Europium-154	0.07996		0.0522	0.0529		0.0731	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Europium-155	0.007543	U	0.0639	0.0639		0.293	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Sodium-22	0.03793		0.0263	0.0265		0.0349	pCi/g	09/02/21 09:49	09/29/21 06:07	1
Zinc-65	0.0006448	U	0.0989	0.0989		0.189	pCi/g	09/02/21 09:49	09/29/21 06:07	1

Lab Sample ID: LCS 160-525240/2-A
Matrix: Solid
Analysis Batch: 529302

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525240

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	102.5		11.8		1.33	pCi/g	106	87 - 116
Cesium-137	26.2	29.40		3.04		0.318	pCi/g	112	87 - 120
Cobalt-60	8.53	9.460		0.982		0.159	pCi/g	111	87 - 115

Lab Sample ID: MB 160-525244/1-A
Matrix: Solid
Analysis Batch: 528728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525244

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.04231	U	0.111	0.111		0.270	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Bismuth-212	-0.3410	U	0.733	0.734		1.29	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Bismuth-214	-0.08077	U	0.124	0.124		0.421	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Lead-212	-0.04483	U	0.148	0.148		0.205	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Lead-214	-0.04880	U	0.0629	0.0631		0.201	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Potassium-40	-0.4152	U	0.770	0.771		1.19	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Radium-226	-0.08077	U	0.124	0.124	1.00	0.421	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Thorium-232	0.04231	U	0.111	0.111		0.270	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Americium-241	0.04333	U	0.0992	0.0993		0.140	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Cesium-137	-0.02750	U	0.0681	0.0681		0.120	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Cobalt-60	-0.001212	U	0.0649	0.0649		0.0836	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-152	0.08254	U	0.117	0.117		0.108	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-154	0.04157	U	0.0703	0.0704		0.0893	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-155	-0.07216	U	0.219	0.220		0.377	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Sodium-22	0.02822	U	0.0247	0.0249		0.0416	pCi/g	09/02/21 11:05	09/24/21 11:11	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-525244/1-A
Matrix: Solid
Analysis Batch: 528728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525244

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Zinc-65	0.0000	U	0.0197	0.0197		0.215	pCi/g	09/02/21 11:05	09/24/21 11:11	1

Lab Sample ID: LCS 160-525244/2-A
Matrix: Solid
Analysis Batch: 528705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525244

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	101.9		10.5		1.02	pCi/g	106	87 - 116
Cesium-137	26.2	26.70		2.79		0.144	pCi/g	102	87 - 120
Cobalt-60	8.54	8.653		0.902		0.0916	pCi/g	101	87 - 115

Lab Sample ID: 160-43230-A-7-D DU
Matrix: Solid
Analysis Batch: 528706

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525244

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.705		0.4722		0.131		0.0627	pCi/g	2.09	2
Bismuth-212	0.311	U	0.9352		0.328		0.203	pCi/g	1.91	2
Bismuth-214	0.335		0.4007		0.104		0.0829	pCi/g	0.85	2
Lead-212	0.406		0.4810		0.0937		0.0614	pCi/g	1.07	2
Lead-214	0.437		0.3336		0.0791		0.0869	pCi/g	1.42	2
Potassium-40	5.18		6.620		1.14		0.248	pCi/g	1.79	2
Radium-226	0.335		0.4007		0.104	1.00	0.0829	pCi/g	0.85	2
Thorium-232	0.705		0.4722		0.131		0.0627	pCi/g	2.09	2
Americium-241	0.0470	U	0.01341	U	0.124		0.215	pCi/g	0.37	2
Cesium-137	0.0402	U	0.0000	U	0.0244		0.0771	pCi/g	1.05	2
Cobalt-60	0.0475		0.004441	U	0.0372		0.0460	pCi/g	1.78	2
Europium-152	0.0802	U	0.09656	U	0.135		0.128	pCi/g	0.17	2
Europium-154	0.0526	U	-0.03643	U	0.0639		0.109	pCi/g	2.34	2
Europium-155	0.0520	U	-0.07656	U	0.216		0.367	pCi/g	1.04	2
Sodium-22	0.0321		0.02301	U	0.0272		0.0444	pCi/g	0.50	2
Zinc-65	0.0143	U	0.0000	U	0.0317		0.213	pCi/g	0.20	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-527434/1-A
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527434

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.6825	U	1.08	1.08	5.00	1.87	pCi/g	09/16/21 17:56	09/24/21 13:38	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*75.4*		*40 - 110*	*09/16/21 17:56*	*09/24/21 13:38*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-527434/2-A
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527434

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	17.81		2.30	5.00	1.40	pCi/g	83	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*99.4*		*40 - 110*

Lab Sample ID: 160-43195-12 DU
Matrix: Solid
Analysis Batch: 528931

Client Sample ID: FSS-126-082421
Prep Type: Total/NA
Prep Batch: 527434

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.844	U		0.03536	U	0.779	5.00	1.39	pCi/g			1.43	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*104*		*40 - 110*

Lab Sample ID: MB 160-527686/1-A
Matrix: Solid
Analysis Batch: 528903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527686

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.172	U	1.02	1.03	5.00	1.73	pCi/g	09/20/21 14:05	09/25/21 17:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*78.4*		*40 - 110*	*09/20/21 14:05*	*09/25/21 17:53*	*1*

Lab Sample ID: LCS 160-527686/2-A
Matrix: Solid
Analysis Batch: 528903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527686

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	19.98		2.56	5.00	1.49	pCi/g	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*89.2*		*40 - 110*

Lab Sample ID: 160-43195-33 DU
Matrix: Solid
Analysis Batch: 528903

Client Sample ID: FSS-144-082421
Prep Type: Total/NA
Prep Batch: 527686

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.13	U		2.460	U	2.00	5.00	3.37	pCi/g			1.17	3

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-43195-33 DU
Matrix: Solid
Analysis Batch: 528903

Client Sample ID: FSS-144-082421
Prep Type: Total/NA
Prep Batch: 527686

Carrier	DU %Yield	DU Qualifier	Limits
Ni	40.4		40 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526533/1-A
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526533

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.213	U	1.64	1.65	5.00	2.42	pCi/g	09/12/21 17:46	09/27/21 14:38	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	84.7		30 - 110	09/12/21 17:46	09/27/21 14:38	1

Lab Sample ID: LCS 160-526533/2-A
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526533

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	22.30		3.87	5.00	2.92	pCi/g	112	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	75.5		30 - 110

Lab Sample ID: 160-43157-D-24-L DU
Matrix: Solid
Analysis Batch: 529107

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526533

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	0.0180	U		0.9626	U	1.57	5.00	2.29	pCi/g			0.82	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	81.3		30 - 110

Lab Sample ID: MB 160-528278/1-A
Matrix: Solid
Analysis Batch: 529519

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528278

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.593	U	3.27	3.28	5.00	6.13	pCi/g	09/21/21 14:59	09/30/21 05:16	1

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: LCS 160-528278/2-A
Matrix: Solid
Analysis Batch: 529519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528278

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			39.7	46.19		7.06	5.00	5.93	pCi/g	116	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*94.8*		*30 - 110*

Lab Sample ID: LCSD 160-528278/3-A
Matrix: Solid
Analysis Batch: 529519

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 528278

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Plutonium-241			39.7	51.62	J	7.62	5.00	6.14	pCi/g	130	75 - 125	1.02	3

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Pu-242 (T)	*93.9*		*30 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Metals

Prep Batch: 549134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	3050B	
160-43195-2	FSS-116-082421	Total/NA	Solid	3050B	
160-43195-3	FSS-117-082421	Total/NA	Solid	3050B	
160-43195-4	FSS-118-082421	Total/NA	Solid	3050B	
160-43195-5	FSS-119-082421	Total/NA	Solid	3050B	
160-43195-6	FSS-120-082421	Total/NA	Solid	3050B	
160-43195-7	FSS-121-082421	Total/NA	Solid	3050B	
160-43195-8	FSS-122-082421	Total/NA	Solid	3050B	
160-43195-9	FSS-123-082421	Total/NA	Solid	3050B	
160-43195-10	FSS-124-082421	Total/NA	Solid	3050B	
160-43195-11	FSS-125-082421	Total/NA	Solid	3050B	
160-43195-12	FSS-126-082421	Total/NA	Solid	3050B	
160-43195-13	FSS-127-082421	Total/NA	Solid	3050B	
160-43195-14	FSS-128-082421	Total/NA	Solid	3050B	
160-43195-15	FSS-129-082421	Total/NA	Solid	3050B	
160-43195-16	FSS-130-082421	Total/NA	Solid	3050B	
160-43195-17	FSS-131-082421	Total/NA	Solid	3050B	
160-43195-18	FSS-132-082421	Total/NA	Solid	3050B	
MB 280-549134/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549134/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43195-1 MS	FSS-115-082421	Total/NA	Solid	3050B	
160-43195-1 MSD	FSS-115-082421	Total/NA	Solid	3050B	

Analysis Batch: 550156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	6020B	549134
160-43195-2	FSS-116-082421	Total/NA	Solid	6020B	549134
160-43195-3	FSS-117-082421	Total/NA	Solid	6020B	549134
160-43195-4	FSS-118-082421	Total/NA	Solid	6020B	549134
160-43195-5	FSS-119-082421	Total/NA	Solid	6020B	549134
160-43195-6	FSS-120-082421	Total/NA	Solid	6020B	549134
160-43195-7	FSS-121-082421	Total/NA	Solid	6020B	549134
160-43195-8	FSS-122-082421	Total/NA	Solid	6020B	549134
160-43195-9	FSS-123-082421	Total/NA	Solid	6020B	549134
160-43195-10	FSS-124-082421	Total/NA	Solid	6020B	549134
160-43195-11	FSS-125-082421	Total/NA	Solid	6020B	549134
160-43195-12	FSS-126-082421	Total/NA	Solid	6020B	549134
160-43195-13	FSS-127-082421	Total/NA	Solid	6020B	549134
160-43195-14	FSS-128-082421	Total/NA	Solid	6020B	549134
160-43195-15	FSS-129-082421	Total/NA	Solid	6020B	549134
160-43195-16	FSS-130-082421	Total/NA	Solid	6020B	549134
160-43195-17	FSS-131-082421	Total/NA	Solid	6020B	549134
160-43195-18	FSS-132-082421	Total/NA	Solid	6020B	549134
MB 280-549134/1-A	Method Blank	Total/NA	Solid	6020B	549134
LCS 280-549134/2-A	Lab Control Sample	Total/NA	Solid	6020B	549134
160-43195-1 MS	FSS-115-082421	Total/NA	Solid	6020B	549134
160-43195-1 MSD	FSS-115-082421	Total/NA	Solid	6020B	549134

Prep Batch: 550158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	7471B	

Metals (Continued)

Prep Batch: 550158 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-2	FSS-116-082421	Total/NA	Solid	7471B	
160-43195-3	FSS-117-082421	Total/NA	Solid	7471B	
160-43195-4	FSS-118-082421	Total/NA	Solid	7471B	
160-43195-5	FSS-119-082421	Total/NA	Solid	7471B	
160-43195-6	FSS-120-082421	Total/NA	Solid	7471B	
160-43195-7	FSS-121-082421	Total/NA	Solid	7471B	
160-43195-8	FSS-122-082421	Total/NA	Solid	7471B	
160-43195-9	FSS-123-082421	Total/NA	Solid	7471B	
160-43195-10	FSS-124-082421	Total/NA	Solid	7471B	
160-43195-11	FSS-125-082421	Total/NA	Solid	7471B	
160-43195-12	FSS-126-082421	Total/NA	Solid	7471B	
160-43195-13	FSS-127-082421	Total/NA	Solid	7471B	
160-43195-14	FSS-128-082421	Total/NA	Solid	7471B	
160-43195-15	FSS-129-082421	Total/NA	Solid	7471B	
160-43195-16	FSS-130-082421	Total/NA	Solid	7471B	
160-43195-17	FSS-131-082421	Total/NA	Solid	7471B	
160-43195-18	FSS-132-082421	Total/NA	Solid	7471B	
MB 280-550158/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-550158/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-43195-1 MS	FSS-115-082421	Total/NA	Solid	7471B	
160-43195-1 MSD	FSS-115-082421	Total/NA	Solid	7471B	

Prep Batch: 550161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-25	FSS-139-082421	Total/NA	Solid	7471B	
160-43195-26	FSS-140-082421	Total/NA	Solid	7471B	
160-43195-27	FSS-141-082421	Total/NA	Solid	7471B	
160-43195-28	FSS-339-082421	Total/NA	Solid	7471B	
160-43195-29	FSS-340-082421	Total/NA	Solid	7471B	
160-43195-30	FSS-341-082421	Total/NA	Solid	7471B	
160-43195-31	FSS-142-082421	Total/NA	Solid	7471B	
160-43195-32	FSS-143-082421	Total/NA	Solid	7471B	
160-43195-33	FSS-144-082421	Total/NA	Solid	7471B	

Prep Batch: 550205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-25	FSS-139-082421	Total/NA	Solid	3050B	
160-43195-26	FSS-140-082421	Total/NA	Solid	3050B	
160-43195-27	FSS-141-082421	Total/NA	Solid	3050B	
160-43195-28	FSS-339-082421	Total/NA	Solid	3050B	
160-43195-29	FSS-340-082421	Total/NA	Solid	3050B	
160-43195-30	FSS-341-082421	Total/NA	Solid	3050B	
160-43195-31	FSS-142-082421	Total/NA	Solid	3050B	
160-43195-32	FSS-143-082421	Total/NA	Solid	3050B	
160-43195-33	FSS-144-082421	Total/NA	Solid	3050B	

Analysis Batch: 550342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	7471B	550158
160-43195-2	FSS-116-082421	Total/NA	Solid	7471B	550158
160-43195-3	FSS-117-082421	Total/NA	Solid	7471B	550158

Metals (Continued)

Analysis Batch: 550342 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-4	FSS-118-082421	Total/NA	Solid	7471B	550158
160-43195-5	FSS-119-082421	Total/NA	Solid	7471B	550158
160-43195-6	FSS-120-082421	Total/NA	Solid	7471B	550158
160-43195-7	FSS-121-082421	Total/NA	Solid	7471B	550158
160-43195-8	FSS-122-082421	Total/NA	Solid	7471B	550158
160-43195-9	FSS-123-082421	Total/NA	Solid	7471B	550158
160-43195-10	FSS-124-082421	Total/NA	Solid	7471B	550158
160-43195-11	FSS-125-082421	Total/NA	Solid	7471B	550158
160-43195-12	FSS-126-082421	Total/NA	Solid	7471B	550158
160-43195-13	FSS-127-082421	Total/NA	Solid	7471B	550158
160-43195-14	FSS-128-082421	Total/NA	Solid	7471B	550158
160-43195-15	FSS-129-082421	Total/NA	Solid	7471B	550158
160-43195-16	FSS-130-082421	Total/NA	Solid	7471B	550158
160-43195-17	FSS-131-082421	Total/NA	Solid	7471B	550158
160-43195-18	FSS-132-082421	Total/NA	Solid	7471B	550158
160-43195-25	FSS-139-082421	Total/NA	Solid	7471B	550161
160-43195-26	FSS-140-082421	Total/NA	Solid	7471B	550161
160-43195-27	FSS-141-082421	Total/NA	Solid	7471B	550161
160-43195-28	FSS-339-082421	Total/NA	Solid	7471B	550161
160-43195-29	FSS-340-082421	Total/NA	Solid	7471B	550161
160-43195-30	FSS-341-082421	Total/NA	Solid	7471B	550161
160-43195-31	FSS-142-082421	Total/NA	Solid	7471B	550161
160-43195-32	FSS-143-082421	Total/NA	Solid	7471B	550161
160-43195-33	FSS-144-082421	Total/NA	Solid	7471B	550161
MB 280-550158/1-A	Method Blank	Total/NA	Solid	7471B	550158
LCS 280-550158/2-A	Lab Control Sample	Total/NA	Solid	7471B	550158
160-43195-1 MS	FSS-115-082421	Total/NA	Solid	7471B	550158
160-43195-1 MSD	FSS-115-082421	Total/NA	Solid	7471B	550158

Analysis Batch: 550511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-25	FSS-139-082421	Total/NA	Solid	6020B	550205
160-43195-26	FSS-140-082421	Total/NA	Solid	6020B	550205
160-43195-27	FSS-141-082421	Total/NA	Solid	6020B	550205
160-43195-28	FSS-339-082421	Total/NA	Solid	6020B	550205
160-43195-29	FSS-340-082421	Total/NA	Solid	6020B	550205
160-43195-30	FSS-341-082421	Total/NA	Solid	6020B	550205
160-43195-31	FSS-142-082421	Total/NA	Solid	6020B	550205
160-43195-32	FSS-143-082421	Total/NA	Solid	6020B	550205
160-43195-33	FSS-144-082421	Total/NA	Solid	6020B	550205

Prep Batch: 553378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	3050B	
160-43195-23	FSS-134-082421	Total/NA	Solid	3050B	
160-43195-24	FSS-135-082421	Total/NA	Solid	3050B	
MB 280-553378/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-553378/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43195-22 MS	FSS-133-082421	Total/NA	Solid	3050B	
160-43195-22 MSD	FSS-133-082421	Total/NA	Solid	3050B	
160-43195-23 MS	FSS-134-082421	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 553378 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-23 MSD	FSS-134-082421	Total/NA	Solid	3050B	
160-43195-24 MS	FSS-135-082421	Total/NA	Solid	3050B	
160-43195-24 MSD	FSS-135-082421	Total/NA	Solid	3050B	

Prep Batch: 553410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	7471B	
160-43195-23	FSS-134-082421	Total/NA	Solid	7471B	
160-43195-24	FSS-135-082421	Total/NA	Solid	7471B	
MB 280-553410/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-553410/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-553410/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43195-22 MS	FSS-133-082421	Total/NA	Solid	7471B	
160-43195-22 MSD	FSS-133-082421	Total/NA	Solid	7471B	
160-43195-23 MS	FSS-134-082421	Total/NA	Solid	7471B	
160-43195-23 MSD	FSS-134-082421	Total/NA	Solid	7471B	
160-43195-24 MS	FSS-135-082421	Total/NA	Solid	7471B	
160-43195-24 MSD	FSS-135-082421	Total/NA	Solid	7471B	

Analysis Batch: 553563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	7471B	553410
160-43195-23	FSS-134-082421	Total/NA	Solid	7471B	553410
160-43195-24	FSS-135-082421	Total/NA	Solid	7471B	553410
MB 280-553410/1-A	Method Blank	Total/NA	Solid	7471B	553410
LCS 280-553410/2-A	Lab Control Sample	Total/NA	Solid	7471B	553410
LCSD 280-553410/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	553410
160-43195-22 MS	FSS-133-082421	Total/NA	Solid	7471B	553410
160-43195-22 MSD	FSS-133-082421	Total/NA	Solid	7471B	553410
160-43195-23 MS	FSS-134-082421	Total/NA	Solid	7471B	553410
160-43195-23 MSD	FSS-134-082421	Total/NA	Solid	7471B	553410
160-43195-24 MS	FSS-135-082421	Total/NA	Solid	7471B	553410
160-43195-24 MSD	FSS-135-082421	Total/NA	Solid	7471B	553410

Analysis Batch: 553656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	6020B	553378
160-43195-23	FSS-134-082421	Total/NA	Solid	6020B	553378
160-43195-24	FSS-135-082421	Total/NA	Solid	6020B	553378
MB 280-553378/1-A	Method Blank	Total/NA	Solid	6020B	553378
LCS 280-553378/2-A	Lab Control Sample	Total/NA	Solid	6020B	553378
160-43195-22 MS	FSS-133-082421	Total/NA	Solid	6020B	553378
160-43195-22 MSD	FSS-133-082421	Total/NA	Solid	6020B	553378
160-43195-23 MS	FSS-134-082421	Total/NA	Solid	6020B	553378
160-43195-23 MSD	FSS-134-082421	Total/NA	Solid	6020B	553378
160-43195-24 MS	FSS-135-082421	Total/NA	Solid	6020B	553378
160-43195-24 MSD	FSS-135-082421	Total/NA	Solid	6020B	553378

General Chemistry

Analysis Batch: 548659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	Moisture	
160-43195-2	FSS-116-082421	Total/NA	Solid	Moisture	
160-43195-3	FSS-117-082421	Total/NA	Solid	Moisture	
160-43195-4	FSS-118-082421	Total/NA	Solid	Moisture	
160-43195-5	FSS-119-082421	Total/NA	Solid	Moisture	
160-43195-6	FSS-120-082421	Total/NA	Solid	Moisture	
160-43195-7	FSS-121-082421	Total/NA	Solid	Moisture	
160-43195-8	FSS-122-082421	Total/NA	Solid	Moisture	
160-43195-9	FSS-123-082421	Total/NA	Solid	Moisture	
160-43195-10	FSS-124-082421	Total/NA	Solid	Moisture	
160-43195-11	FSS-125-082421	Total/NA	Solid	Moisture	
160-43195-12	FSS-126-082421	Total/NA	Solid	Moisture	
160-43195-13	FSS-127-082421	Total/NA	Solid	Moisture	
160-43195-14	FSS-128-082421	Total/NA	Solid	Moisture	
160-43195-15	FSS-129-082421	Total/NA	Solid	Moisture	
160-43195-16	FSS-130-082421	Total/NA	Solid	Moisture	
160-43195-17	FSS-131-082421	Total/NA	Solid	Moisture	
160-43195-18	FSS-132-082421	Total/NA	Solid	Moisture	
160-43195-22	FSS-133-082421	Total/NA	Solid	Moisture	
160-43195-23	FSS-134-082421	Total/NA	Solid	Moisture	
160-43195-24	FSS-135-082421	Total/NA	Solid	Moisture	
160-43195-25	FSS-139-082421	Total/NA	Solid	Moisture	
160-43195-26	FSS-140-082421	Total/NA	Solid	Moisture	
160-43195-27	FSS-141-082421	Total/NA	Solid	Moisture	
160-43195-28	FSS-339-082421	Total/NA	Solid	Moisture	
160-43195-29	FSS-340-082421	Total/NA	Solid	Moisture	
160-43195-30	FSS-341-082421	Total/NA	Solid	Moisture	
160-43195-31	FSS-142-082421	Total/NA	Solid	Moisture	
160-43195-32	FSS-143-082421	Total/NA	Solid	Moisture	
160-43195-33	FSS-144-082421	Total/NA	Solid	Moisture	
160-43195-1 DU	FSS-115-082421	Total/NA	Solid	Moisture	

Rad

Leach Batch: 523700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43157-D-24-H DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43157-D-24-J DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43124-D-21-K DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-A-7-D DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	Dry and Grind	
160-43195-2	FSS-116-082421	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 524351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-3	FSS-117-082421	Total/NA	Solid	Dry and Grind	
160-43195-4	FSS-118-082421	Total/NA	Solid	Dry and Grind	
160-43195-5	FSS-119-082421	Total/NA	Solid	Dry and Grind	
160-43195-6	FSS-120-082421	Total/NA	Solid	Dry and Grind	
160-43195-7	FSS-121-082421	Total/NA	Solid	Dry and Grind	
160-43195-8	FSS-122-082421	Total/NA	Solid	Dry and Grind	
160-43195-9	FSS-123-082421	Total/NA	Solid	Dry and Grind	
160-43195-10	FSS-124-082421	Total/NA	Solid	Dry and Grind	
160-43195-11	FSS-125-082421	Total/NA	Solid	Dry and Grind	
160-43195-12	FSS-126-082421	Total/NA	Solid	Dry and Grind	
160-43195-13	FSS-127-082421	Total/NA	Solid	Dry and Grind	
160-43195-14	FSS-128-082421	Total/NA	Solid	Dry and Grind	
160-43195-15	FSS-129-082421	Total/NA	Solid	Dry and Grind	
160-43195-16	FSS-130-082421	Total/NA	Solid	Dry and Grind	
160-43195-17	FSS-131-082421	Total/NA	Solid	Dry and Grind	
160-43195-18	FSS-132-082421	Total/NA	Solid	Dry and Grind	
160-43195-22	FSS-133-082421	Total/NA	Solid	Dry and Grind	
160-43195-23	FSS-134-082421	Total/NA	Solid	Dry and Grind	
160-43195-24	FSS-135-082421	Total/NA	Solid	Dry and Grind	
160-43195-25	FSS-139-082421	Total/NA	Solid	Dry and Grind	
160-43195-26	FSS-140-082421	Total/NA	Solid	Dry and Grind	
160-43195-27	FSS-141-082421	Total/NA	Solid	Dry and Grind	
160-43195-28	FSS-339-082421	Total/NA	Solid	Dry and Grind	
160-43195-29	FSS-340-082421	Total/NA	Solid	Dry and Grind	
160-43195-30	FSS-341-082421	Total/NA	Solid	Dry and Grind	
160-43195-31	FSS-142-082421	Total/NA	Solid	Dry and Grind	
160-43195-32	FSS-143-082421	Total/NA	Solid	Dry and Grind	
160-43195-33	FSS-144-082421	Total/NA	Solid	Dry and Grind	
160-43195-10 DU	FSS-124-082421	Total/NA	Solid	Dry and Grind	
160-43195-12 DU	FSS-126-082421	Total/NA	Solid	Dry and Grind	
160-43195-30 DU	FSS-341-082421	Total/NA	Solid	Dry and Grind	
160-43195-33 DU	FSS-144-082421	Total/NA	Solid	Dry and Grind	

Prep Batch: 525240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-2	FSS-116-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-3	FSS-117-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-4	FSS-118-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-5	FSS-119-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-6	FSS-120-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-7	FSS-121-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-8	FSS-122-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-9	FSS-123-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-10	FSS-124-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-11	FSS-125-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-12	FSS-126-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-13	FSS-127-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-14	FSS-128-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-15	FSS-129-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-16	FSS-130-082421	Total/NA	Solid	Fill_Geo-21	524351

Rad (Continued)

Prep Batch: 525240 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-17	FSS-131-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-18	FSS-132-082421	Total/NA	Solid	Fill_Geo-21	524351
MB 160-525240/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525240/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 525244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-23	FSS-134-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-24	FSS-135-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-25	FSS-139-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-26	FSS-140-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-27	FSS-141-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-28	FSS-339-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-29	FSS-340-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-30	FSS-341-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-31	FSS-142-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-32	FSS-143-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-33	FSS-144-082421	Total/NA	Solid	Fill_Geo-21	524351
MB 160-525244/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525244/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43230-A-7-D DU	Duplicate	Total/NA	Solid	Fill_Geo-21	524348

Prep Batch: 526438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	ExtChrom	524351
160-43195-2	FSS-116-082421	Total/NA	Solid	ExtChrom	524351
160-43195-3	FSS-117-082421	Total/NA	Solid	ExtChrom	524351
160-43195-4	FSS-118-082421	Total/NA	Solid	ExtChrom	524351
160-43195-5	FSS-119-082421	Total/NA	Solid	ExtChrom	524351
160-43195-6	FSS-120-082421	Total/NA	Solid	ExtChrom	524351
160-43195-7	FSS-121-082421	Total/NA	Solid	ExtChrom	524351
160-43195-8	FSS-122-082421	Total/NA	Solid	ExtChrom	524351
160-43195-12	FSS-126-082421	Total/NA	Solid	ExtChrom	524351
160-43195-13	FSS-127-082421	Total/NA	Solid	ExtChrom	524351
160-43195-14	FSS-128-082421	Total/NA	Solid	ExtChrom	524351
160-43195-15	FSS-129-082421	Total/NA	Solid	ExtChrom	524351
160-43195-16	FSS-130-082421	Total/NA	Solid	ExtChrom	524351
160-43195-17	FSS-131-082421	Total/NA	Solid	ExtChrom	524351
160-43195-18	FSS-132-082421	Total/NA	Solid	ExtChrom	524351
MB 160-526438/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526438/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-D-24-H DU	Duplicate	Total/NA	Solid	ExtChrom	523700

Prep Batch: 526439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	ExtChrom	524351
160-43195-23	FSS-134-082421	Total/NA	Solid	ExtChrom	524351
160-43195-24	FSS-135-082421	Total/NA	Solid	ExtChrom	524351
160-43195-25	FSS-139-082421	Total/NA	Solid	ExtChrom	524351
160-43195-26	FSS-140-082421	Total/NA	Solid	ExtChrom	524351

Rad (Continued)

Prep Batch: 526439 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-27	FSS-141-082421	Total/NA	Solid	ExtChrom	524351
160-43195-28	FSS-339-082421	Total/NA	Solid	ExtChrom	524351
160-43195-29	FSS-340-082421	Total/NA	Solid	ExtChrom	524351
160-43195-30	FSS-341-082421	Total/NA	Solid	ExtChrom	524351
160-43195-31	FSS-142-082421	Total/NA	Solid	ExtChrom	524351
160-43195-32	FSS-143-082421	Total/NA	Solid	ExtChrom	524351
160-43195-33	FSS-144-082421	Total/NA	Solid	ExtChrom	524351
MB 160-526439/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526439/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	

Prep Batch: 526532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	ExtChrom	524351
160-43195-2	FSS-116-082421	Total/NA	Solid	ExtChrom	524351
160-43195-3	FSS-117-082421	Total/NA	Solid	ExtChrom	524351
160-43195-4	FSS-118-082421	Total/NA	Solid	ExtChrom	524351
160-43195-5	FSS-119-082421	Total/NA	Solid	ExtChrom	524351
160-43195-6	FSS-120-082421	Total/NA	Solid	ExtChrom	524351
160-43195-7	FSS-121-082421	Total/NA	Solid	ExtChrom	524351
160-43195-8	FSS-122-082421	Total/NA	Solid	ExtChrom	524351
160-43195-12	FSS-126-082421	Total/NA	Solid	ExtChrom	524351
160-43195-13	FSS-127-082421	Total/NA	Solid	ExtChrom	524351
160-43195-14	FSS-128-082421	Total/NA	Solid	ExtChrom	524351
160-43195-15	FSS-129-082421	Total/NA	Solid	ExtChrom	524351
160-43195-16	FSS-130-082421	Total/NA	Solid	ExtChrom	524351
160-43195-17	FSS-131-082421	Total/NA	Solid	ExtChrom	524351
160-43195-18	FSS-132-082421	Total/NA	Solid	ExtChrom	524351
MB 160-526532/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526532/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43157-D-24-J DU	Duplicate	Total/NA	Solid	ExtChrom	523700

Prep Batch: 526533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	Leach_Precip	
160-43195-2	FSS-116-082421	Total/NA	Solid	Leach_Precip	
160-43195-3	FSS-117-082421	Total/NA	Solid	Leach_Precip	
160-43195-4	FSS-118-082421	Total/NA	Solid	Leach_Precip	
160-43195-5	FSS-119-082421	Total/NA	Solid	Leach_Precip	
160-43195-6	FSS-120-082421	Total/NA	Solid	Leach_Precip	
160-43195-7	FSS-121-082421	Total/NA	Solid	Leach_Precip	
160-43195-8	FSS-122-082421	Total/NA	Solid	Leach_Precip	
160-43195-12	FSS-126-082421	Total/NA	Solid	Leach_Precip	
160-43195-13	FSS-127-082421	Total/NA	Solid	Leach_Precip	
160-43195-14	FSS-128-082421	Total/NA	Solid	Leach_Precip	
160-43195-15	FSS-129-082421	Total/NA	Solid	Leach_Precip	
160-43195-16	FSS-130-082421	Total/NA	Solid	Leach_Precip	
160-43195-17	FSS-131-082421	Total/NA	Solid	Leach_Precip	
160-43195-18	FSS-132-082421	Total/NA	Solid	Leach_Precip	
MB 160-526533/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526533/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43157-D-24-L DU	Duplicate	Total/NA	Solid	Leach_Precip	

Rad

Prep Batch: 526536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	ExtChrom	524351
160-43195-23	FSS-134-082421	Total/NA	Solid	ExtChrom	524351
160-43195-24	FSS-135-082421	Total/NA	Solid	ExtChrom	524351
160-43195-25	FSS-139-082421	Total/NA	Solid	ExtChrom	524351
160-43195-26	FSS-140-082421	Total/NA	Solid	ExtChrom	524351
160-43195-27	FSS-141-082421	Total/NA	Solid	ExtChrom	524351
160-43195-28	FSS-339-082421	Total/NA	Solid	ExtChrom	524351
160-43195-29	FSS-340-082421	Total/NA	Solid	ExtChrom	524351
160-43195-30	FSS-341-082421	Total/NA	Solid	ExtChrom	524351
160-43195-31	FSS-142-082421	Total/NA	Solid	ExtChrom	524351
160-43195-32	FSS-143-082421	Total/NA	Solid	ExtChrom	524351
160-43195-33	FSS-144-082421	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-22	FSS-133-082421	Total/NA	Solid	Leach_Precip	
160-43195-23	FSS-134-082421	Total/NA	Solid	Leach_Precip	
160-43195-24	FSS-135-082421	Total/NA	Solid	Leach_Precip	
160-43195-25	FSS-139-082421	Total/NA	Solid	Leach_Precip	
160-43195-26	FSS-140-082421	Total/NA	Solid	Leach_Precip	
160-43195-27	FSS-141-082421	Total/NA	Solid	Leach_Precip	
160-43195-28	FSS-339-082421	Total/NA	Solid	Leach_Precip	
160-43195-29	FSS-340-082421	Total/NA	Solid	Leach_Precip	
160-43195-30	FSS-341-082421	Total/NA	Solid	Leach_Precip	
160-43195-31	FSS-142-082421	Total/NA	Solid	Leach_Precip	
160-43195-32	FSS-143-082421	Total/NA	Solid	Leach_Precip	
160-43195-33	FSS-144-082421	Total/NA	Solid	Leach_Precip	

Prep Batch: 527434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-2	FSS-116-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-3	FSS-117-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-4	FSS-118-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-5	FSS-119-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-6	FSS-120-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-7	FSS-121-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-8	FSS-122-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-9	FSS-123-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-10	FSS-124-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-11	FSS-125-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-12	FSS-126-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-13	FSS-127-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
MB 160-527434/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-527434/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43195-12 DU	FSS-126-082421	Total/NA	Solid	Ext_Chrom_LSC	524351

Prep Batch: 527607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	DPS-7	524351
160-43195-2	FSS-116-082421	Total/NA	Solid	DPS-7	524351

Rad (Continued)

Prep Batch: 527607 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-3	FSS-117-082421	Total/NA	Solid	DPS-7	524351
160-43195-4	FSS-118-082421	Total/NA	Solid	DPS-7	524351
160-43195-5	FSS-119-082421	Total/NA	Solid	DPS-7	524351
160-43195-6	FSS-120-082421	Total/NA	Solid	DPS-7	524351
160-43195-7	FSS-121-082421	Total/NA	Solid	DPS-7	524351
160-43195-8	FSS-122-082421	Total/NA	Solid	DPS-7	524351
160-43195-9	FSS-123-082421	Total/NA	Solid	DPS-7	524351
MB 160-527607/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527607/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43124-D-21-K DU	Duplicate	Total/NA	Solid	DPS-7	524231

Prep Batch: 527613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-2	FSS-116-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-3	FSS-117-082421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527613/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527613/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-2 MS	FSS-116-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-3 DU	FSS-117-082421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-4	FSS-118-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-5	FSS-119-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-6	FSS-120-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-7	FSS-121-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-8	FSS-122-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-9	FSS-123-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-10	FSS-124-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-11	FSS-125-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-12	FSS-126-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-13	FSS-127-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-14	FSS-128-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-15	FSS-129-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-16	FSS-130-082421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527614/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527614/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-15 MS	FSS-129-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-16 DU	FSS-130-082421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 527618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-10	FSS-124-082421	Total/NA	Solid	DPS-7	524351
160-43195-11	FSS-125-082421	Total/NA	Solid	DPS-7	524351
160-43195-12	FSS-126-082421	Total/NA	Solid	DPS-7	524351
160-43195-13	FSS-127-082421	Total/NA	Solid	DPS-7	524351
160-43195-14	FSS-128-082421	Total/NA	Solid	DPS-7	524351
160-43195-15	FSS-129-082421	Total/NA	Solid	DPS-7	524351
160-43195-16	FSS-130-082421	Total/NA	Solid	DPS-7	524351
160-43195-17	FSS-131-082421	Total/NA	Solid	DPS-7	524351

Rad (Continued)

Prep Batch: 527618 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-18	FSS-132-082421	Total/NA	Solid	DPS-7	524351
160-43195-22	FSS-133-082421	Total/NA	Solid	DPS-7	524351
160-43195-23	FSS-134-082421	Total/NA	Solid	DPS-7	524351
160-43195-24	FSS-135-082421	Total/NA	Solid	DPS-7	524351
160-43195-25	FSS-139-082421	Total/NA	Solid	DPS-7	524351
160-43195-26	FSS-140-082421	Total/NA	Solid	DPS-7	524351
160-43195-27	FSS-141-082421	Total/NA	Solid	DPS-7	524351
160-43195-28	FSS-339-082421	Total/NA	Solid	DPS-7	524351
160-43195-29	FSS-340-082421	Total/NA	Solid	DPS-7	524351
160-43195-10 DU	FSS-124-082421	Total/NA	Solid	DPS-7	524351

Prep Batch: 527652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-30	FSS-341-082421	Total/NA	Solid	DPS-7	524351
160-43195-31	FSS-142-082421	Total/NA	Solid	DPS-7	524351
160-43195-32	FSS-143-082421	Total/NA	Solid	DPS-7	524351
160-43195-33	FSS-144-082421	Total/NA	Solid	DPS-7	524351
MB 160-527652/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527652/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43195-30 DU	FSS-341-082421	Total/NA	Solid	DPS-7	524351

Prep Batch: 527686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-14	FSS-128-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-15	FSS-129-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-16	FSS-130-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-17	FSS-131-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-18	FSS-132-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-22	FSS-133-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-23	FSS-134-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-24	FSS-135-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-25	FSS-139-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-26	FSS-140-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-27	FSS-141-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-28	FSS-339-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-29	FSS-340-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-30	FSS-341-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-31	FSS-142-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-32	FSS-143-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-33	FSS-144-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
MB 160-527686/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-527686/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43195-33 DU	FSS-144-082421	Total/NA	Solid	Ext_Chrom_LSC	524351

Prep Batch: 527693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-17	FSS-131-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-18	FSS-132-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-22	FSS-133-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-23	FSS-134-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-24	FSS-135-082421	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 527693 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-25	FSS-139-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-26	FSS-140-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-27	FSS-141-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-28	FSS-339-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-29	FSS-340-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-30	FSS-341-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-31	FSS-142-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-32	FSS-143-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-33	FSS-144-082421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-527693/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-527693/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-32 MS	FSS-143-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-33 DU	FSS-144-082421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-9	FSS-123-082421	Total/NA	Solid	ExtChrom	524351
160-43195-10	FSS-124-082421	Total/NA	Solid	ExtChrom	524351
160-43195-11	FSS-125-082421	Total/NA	Solid	ExtChrom	524351
MB 160-528277/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-528277/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
LCSD 160-528277/3-A	Lab Control Sample Dup	Total/NA	Solid	ExtChrom	

Prep Batch: 528278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-9	FSS-123-082421	Total/NA	Solid	Leach_Precip	
160-43195-10	FSS-124-082421	Total/NA	Solid	Leach_Precip	
160-43195-11	FSS-125-082421	Total/NA	Solid	Leach_Precip	
MB 160-528278/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-528278/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
LCSD 160-528278/3-A	Lab Control Sample Dup	Total/NA	Solid	Leach_Precip	

Prep Batch: 528279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-9	FSS-123-082421	Total/NA	Solid	ExtChrom	524351
160-43195-10	FSS-124-082421	Total/NA	Solid	ExtChrom	524351
160-43195-11	FSS-125-082421	Total/NA	Solid	ExtChrom	524351
MB 160-528279/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-528279/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
LCSD 160-528279/3-A	Lab Control Sample Dup	Total/NA	Solid	ExtChrom	

Prep Batch: 528500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-1	FSS-115-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-2	FSS-116-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-3	FSS-117-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-4	FSS-118-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-5	FSS-119-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-6	FSS-120-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-7	FSS-121-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-8	FSS-122-082421	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 528500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-528500/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528500/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43157-B-17-F MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43157-B-17-E DU	Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-9	FSS-123-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-10	FSS-124-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-11	FSS-125-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-12	FSS-126-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-13	FSS-127-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-14	FSS-128-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-15	FSS-129-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-16	FSS-130-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-17	FSS-131-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-18	FSS-132-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-22	FSS-133-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-23	FSS-134-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-24	FSS-135-082421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528698/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528698/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-9 MS	FSS-123-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-9 DU	FSS-123-082421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-25	FSS-139-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-26	FSS-140-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-27	FSS-141-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-28	FSS-339-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-29	FSS-340-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-30	FSS-341-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-31	FSS-142-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-32	FSS-143-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-33	FSS-144-082421	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528887/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528887/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43195-25 MS	FSS-139-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-25 DU	FSS-139-082421	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Sr (40-110)	Y (40-110)
160-43124-D-21-K DU	Duplicate	75.6	95.7
160-43195-1	FSS-115-082421	59.8	97.2
160-43195-2	FSS-116-082421	70.0	98.7
160-43195-3	FSS-117-082421	63.1	99.4
160-43195-4	FSS-118-082421	58.0	101
160-43195-5	FSS-119-082421	60.2	100
160-43195-6	FSS-120-082421	68.8	102
160-43195-7	FSS-121-082421	72.4	98.7
160-43195-8	FSS-122-082421	72.2	99.1
160-43195-9	FSS-123-082421	69.1	100
160-43195-10	FSS-124-082421	88.8	99.4
160-43195-10 DU	FSS-124-082421	82.6	101
160-43195-11	FSS-125-082421	90.2	97.6
160-43195-12	FSS-126-082421	88.5	98.3
160-43195-13	FSS-127-082421	77.2	97.6
160-43195-14	FSS-128-082421	79.3	101
160-43195-15	FSS-129-082421	80.4	98.3
160-43195-16	FSS-130-082421	83.5	98.7
160-43195-17	FSS-131-082421	86.7	98.3
160-43195-18	FSS-132-082421	85.5	100
160-43195-22	FSS-133-082421	85.0	97.6
160-43195-23	FSS-134-082421	80.9	100
160-43195-24	FSS-135-082421	82.3	99.8
160-43195-25	FSS-139-082421	92.6	97.6
160-43195-26	FSS-140-082421	86.0	98.3
160-43195-27	FSS-141-082421	79.1	98.7
160-43195-28	FSS-339-082421	90.1	99.1
160-43195-29	FSS-340-082421	84.2	97.9
160-43195-30	FSS-341-082421	79.1	99.4
160-43195-30 DU	FSS-341-082421	75.1	103
160-43195-31	FSS-142-082421	78.9	102
160-43195-32	FSS-143-082421	80.9	101
160-43195-33	FSS-144-082421	75.8	99.8
LCS 160-527607/2-A	Lab Control Sample	87.7	94.2
LCS 160-527652/2-A	Lab Control Sample	87.5	100
MB 160-527607/1-A	Method Blank	83.7	97.2
MB 160-527652/1-A	Method Blank	84.6	98.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Pu-242 (T) (30-110)
160-43157-D-24-H DU	Duplicate	81.3
160-43195-1	FSS-115-082421	63.6

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43195-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43195-2	FSS-116-082421	65.9						
160-43195-3	FSS-117-082421	73.2						
160-43195-4	FSS-118-082421	57.1						
160-43195-5	FSS-119-082421	82.4						
160-43195-6	FSS-120-082421	96.1						
160-43195-7	FSS-121-082421	91.1						
160-43195-8	FSS-122-082421	91.8						
160-43195-9	FSS-123-082421	68.4						
160-43195-10	FSS-124-082421	85.1						
160-43195-11	FSS-125-082421	85.5						
160-43195-12	FSS-126-082421	89.3						
160-43195-13	FSS-127-082421	77.6						
160-43195-14	FSS-128-082421	71.8						
160-43195-15	FSS-129-082421	61.4						
160-43195-16	FSS-130-082421	83.4						
160-43195-17	FSS-131-082421	75.8						
160-43195-18	FSS-132-082421	70.9						
160-43195-22	FSS-133-082421	87.2						
160-43195-23	FSS-134-082421	90.6						
160-43195-24	FSS-135-082421	35.2						
160-43195-25	FSS-139-082421	93.4						
160-43195-26	FSS-140-082421	106						
160-43195-27	FSS-141-082421	91.4						
160-43195-28	FSS-339-082421	97.9						
160-43195-29	FSS-340-082421	104						
160-43195-30	FSS-341-082421	86.1						
160-43195-31	FSS-142-082421	88.8						
160-43195-32	FSS-143-082421	91.1						
160-43195-33	FSS-144-082421	79.9						
LCS 160-526438/2-A	Lab Control Sample	75.5						
LCS 160-526439/2-A	Lab Control Sample	108						
LCS 160-528277/2-A	Lab Control Sample	94.8						
LCSD 160-528277/3-A	Lab Control Sample Dup	93.9						
MB 160-526438/1-A	Method Blank	84.7						
MB 160-526439/1-A	Method Blank	94.7						
MB 160-528277/1-A	Method Blank	89.3						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43157-D-24-J DU	Duplicate	81.0						
160-43195-1	FSS-115-082421	78.9						
160-43195-2	FSS-116-082421	82.3						
160-43195-3	FSS-117-082421	81.4						
160-43195-4	FSS-118-082421	75.2						

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43195-5	FSS-119-082421	81.7						
160-43195-6	FSS-120-082421	44.7						
160-43195-7	FSS-121-082421	82.6						
160-43195-8	FSS-122-082421	76.2						
160-43195-9	FSS-123-082421	75.6						
160-43195-10	FSS-124-082421	82.1						
160-43195-11	FSS-125-082421	80.1						
160-43195-12	FSS-126-082421	95.1						
160-43195-13	FSS-127-082421	76.6						
160-43195-14	FSS-128-082421	72.8						
160-43195-15	FSS-129-082421	65.9						
160-43195-16	FSS-130-082421	68.3						
160-43195-17	FSS-131-082421	74.7						
160-43195-18	FSS-132-082421	64.4						
160-43195-22	FSS-133-082421	80.1						
160-43195-23	FSS-134-082421	75.1						
160-43195-24	FSS-135-082421	41.5						
160-43195-25	FSS-139-082421	86.4						
160-43195-26	FSS-140-082421	82.3						
160-43195-27	FSS-141-082421	80.3						
160-43195-28	FSS-339-082421	80.9						
160-43195-29	FSS-340-082421	78.4						
160-43195-30	FSS-341-082421	78.9						
160-43195-31	FSS-142-082421	82.5						
160-43195-32	FSS-143-082421	80.6						
160-43195-33	FSS-144-082421	88.9						
LCS 160-526532/2-A	Lab Control Sample	71.9						
LCS 160-528279/2-A	Lab Control Sample	87.0						
LCSD 160-528279/3-A	Lab Control Sample Dup	106						
MB 160-526532/1-A	Method Blank	79.2						
MB 160-528279/1-A	Method Blank	85.5						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43195-1	FSS-115-082421	80.6						
160-43195-2	FSS-116-082421	100						
160-43195-3	FSS-117-082421	100						
160-43195-4	FSS-118-082421	92.1						
160-43195-5	FSS-119-082421	98.5						
160-43195-6	FSS-120-082421	99.5						
160-43195-7	FSS-121-082421	98.3						
160-43195-8	FSS-122-082421	98.7						
160-43195-9	FSS-123-082421	99.7						
160-43195-10	FSS-124-082421	101						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43195-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43195-11	FSS-125-082421	104						
160-43195-12	FSS-126-082421	108						
160-43195-12 DU	FSS-126-082421	104						
160-43195-13	FSS-127-082421	110						
160-43195-14	FSS-128-082421	83.7						
160-43195-15	FSS-129-082421	70.9						
160-43195-16	FSS-130-082421	82.1						
160-43195-17	FSS-131-082421	89.7						
160-43195-18	FSS-132-082421	96.0						
160-43195-22	FSS-133-082421	79.9						
160-43195-23	FSS-134-082421	80.6						
160-43195-24	FSS-135-082421	83.6						
160-43195-25	FSS-139-082421	89.5						
160-43195-26	FSS-140-082421	68.2						
160-43195-27	FSS-141-082421	91.0						
160-43195-28	FSS-339-082421	80.8						
160-43195-29	FSS-340-082421	89.6						
160-43195-30	FSS-341-082421	83.2						
160-43195-31	FSS-142-082421	82.9						
160-43195-32	FSS-143-082421	74.9						
160-43195-33	FSS-144-082421	84.2						
160-43195-33 DU	FSS-144-082421	40.4						
LCS 160-527434/2-A	Lab Control Sample	99.4						
LCS 160-527686/2-A	Lab Control Sample	89.2						
MB 160-527434/1-A	Method Blank	75.4						
MB 160-527686/1-A	Method Blank	78.4						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43157-D-24-L DU	Duplicate	81.3						
160-43195-1	FSS-115-082421	63.6						
160-43195-2	FSS-116-082421	65.9						
160-43195-3	FSS-117-082421	73.2						
160-43195-4	FSS-118-082421	57.1						
160-43195-5	FSS-119-082421	82.4						
160-43195-6	FSS-120-082421	96.1						
160-43195-7	FSS-121-082421	91.1						
160-43195-8	FSS-122-082421	91.8						
160-43195-9	FSS-123-082421	68.4						
160-43195-10	FSS-124-082421	85.1						
160-43195-11	FSS-125-082421	85.5						
160-43195-12	FSS-126-082421	89.3						
160-43195-13	FSS-127-082421	77.6						
160-43195-14	FSS-128-082421	71.8						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43195-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43195-15	FSS-129-082421	61.4							
160-43195-16	FSS-130-082421	83.4							
160-43195-17	FSS-131-082421	75.8							
160-43195-18	FSS-132-082421	70.9							
160-43195-22	FSS-133-082421	87.2							
160-43195-23	FSS-134-082421	90.6							
160-43195-24	FSS-135-082421	35.2							
160-43195-25	FSS-139-082421	93.4							
160-43195-26	FSS-140-082421	106							
160-43195-27	FSS-141-082421	91.4							
160-43195-28	FSS-339-082421	97.9							
160-43195-29	FSS-340-082421	104							
160-43195-30	FSS-341-082421	86.1							
160-43195-31	FSS-142-082421	88.8							
160-43195-32	FSS-143-082421	91.1							
160-43195-33	FSS-144-082421	79.9							
LCS 160-526533/2-A	Lab Control Sample	75.5							
LCS 160-528278/2-A	Lab Control Sample	94.8							
LCSD 160-528278/3-A	Lab Control Sample Dup	93.9							
MB 160-526533/1-A	Method Blank	84.7							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	10/11/2021
Sample Receipt Date	08/27/2021
RJ Lee Group Job No.	AOH1063277-0
Authorization/P.O. No.	
Client Job No./Name	160-43195-1

Analysis: Asbestos In Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546739.HPL	FSS-115-082421 (160-43195-1)	Yes	1	ND		100.00	Q, CA, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546740.HPL	FSS-116-082421 (160-43195-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546741.HPL	FSS-117-082421 (160-43195-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Brown Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546742.HPL	FSS-118-082421 (160-43195-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Brown Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546743.HPL	FSS-119-082421 (160-43195-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546744.HPL	FSS-120-082421 (160-43195-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546745.HPL	FSS-121-082421 (160-43195-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546746.HPL	FSS-122-082421 (160-43195-8)	Yes	1	ND		100.00	Q, CA, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43195-1 **RJ Lee Group Job No: AOH1063277-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546747.HPL	FSS-123-082421 (160-43195-9)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546748.HPL	FSS-124-082421 (160-43195-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546749.HPL	FSS-125-082421 (160-43195-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Brown Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546750.HPL	FSS-126-082421 (160-43195-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546751.HPL	FSS-127-082421 (160-43195-13)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546752.HPL	FSS-128-082421 (160-43195-14)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546753.HPL	FSS-129-082421 (160-43195-15)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546754.HPL	FSS-130-082421 (160-43195-16)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546755.HPL	FSS-131-082421 (160-43195-17)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546756.HPL	FSS-132-082421 (160-43195-18)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546757.HPL	FSS-135-082421 (160-43195-19) 136	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546758.HPL	FSS-134-082421 (160-43195-20) 137	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546759.HPL	FSS-135-082421 (160-43195-21) 138	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546760.HPL	FSS-136-082421 (160-43195-22) 133	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546761.HPL	FSS-~~137~~-082421 (160-43195-23) 134 10-15-21	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546762.HPL	FSS-~~126~~-082421 (160-43195-24) 135 10-15-21	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546763.HPL	FSS-139-082421 (160-43195-25)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546764.HPL	FSS-140-082421 (160-43195-26)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546765.HPL	FSS-141-082421 (160-43195-27)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/08/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546766.HPL	FSS-339-082421 (160-43195-28)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546767.HPL	FSS-340-082421 (160-43195-29)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546768.HPL	FSS-341-082421 (160-43195-30)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546769.HPL	FSS-142-082421 (160-43195-31)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546770.HPL	FSS-143-082421 (160-43195-32)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Client Job No./Name: 160-43195-1 RJ Lee Group Job No: AOH1063277-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546771.HPL	FSS-144-082421 (160-43195-33)	Yes	1	ND		100.00	Q, CA, CL, F, OR, OP, MI, M	AC-10/10/2021
Description:	Pale Brown Sediment							
	Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43195-1 **RJ Lee Group Job No: AOH1063277-0**

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: _____

Alexandra Cheek, Microscopist

ASBESTOS
AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS
CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS
AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES
- "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
- "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
- Samples are archived for three months following analysis and are then properly discarded.
- These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
- This test report relates to the items tested.
- This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
- Any reproduction of this document must be in full in order for the report to be valid.
- This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
- Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
- Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
- If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43195-2
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/15/2021 10:04:51 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Job ID: 160-43195-2

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43195-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/25/2021 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 4.5º C, 17.5º C, 18.5º C and 27.4º C.

Receipt Exceptions

Job ID: 160-43195-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples are logged in for MS and/or MSD analysis using the client sample ID as a parent sample ID, and the same ID with MS or MSD on the end is used for the spikes. This allows the system to calculate the QC statistics for sample duplicates. This was unknown to the client at the time the revised COC was delivered. The result was that three samples for three project points (one for each point) were analyzed in duplicate. One of each sample had an MS/MSD analyzed with it. The duplicate sample only results were reported in job 160-43195-2. Refer to Table 1 (Job 160-43195-1 - Updated Sample IDs) after the case narrative for a summary of this information.

ASBESTOS

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis. The report supplied by RJ LEE was annotated by the lab to account for the sample ID updates listed in the receipt exceptions section of the narrative.

NOTES

Due to a limitation of the LIM system, some batch QC sample results will only display in the primary job (160-43195-1) reports. Refer to this job QC sample section for additional batch QC results.

METALS (ICP/MS)

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), and FSS-138-082421 (160-43195-21) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/16/2021, and analyzed on 09/16/2021.

Preparation Batch 280-550205, Analytical Batch 280-550511:
The matrix spike / matrix spike duplicate (MS/MSD) recoveries were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

MERCURY (CVAA)

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), and FSS-138-082421 (160-43195-21) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/18/2021 and analyzed on 09/19/2021.

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

PERCENT SOLIDS

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), and FSS-138-082421 (160-43195-21) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/02/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), and FSS-138-082421 (160-43195-21) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/27/2021, prepared on 09/19/2021 and analyzed on 10/05/2021.

Preparation Batch 160-527618:
The strontium-90 LCS recovered outside the lower QC limit at 42.53% (70%). All of the sample tracer recoveries were in the upper QC range. The highest activity in the group is 0.3514pCi/g. If this result is adjusted for an LCS recovery at 100%, the value would still be at least an order of magnitude below the project action limit of 15pCi/g. To date, 92 project samples have not demonstrated any significant amount of strontium-90 activity. Therefore, given the weight of the site data, the results were reported in consultation with the client: FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), and FSS-138-082421 (160-43195-21).

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

TRITIUM

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for

Job ID: 160-43195-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/20/2021 and analyzed on 09/28/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/27/2021, prepared on 09/11/2021 and 09/21/2021 and analyzed on 09/19/2021, 09/20/2021 and 09/24/2021.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/27/2021, prepared on 09/12/2021 and 09/21/2021 and analyzed on 09/20/2021 and 09/24/2021.

Preparation Batch 160-526536:
Uranium-238 was detected in method blank MB 160-526536/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

Preparation Batch 160-528279:
Uranium-238 was detected in method blank MB 160-528279/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

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

CARBON-14 BY LSC
Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/23/2021, 09/24/2021 and 09/26/2021 and analyzed on 09/27/2021 and 09/28/2021.

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/27/2021, prepared on 09/02/2021 and analyzed on 09/24/2021, 09/28/2021 and 09/29/2021.

Preparation Batch 160-525244:
For samples FSS-138-082421 (160-43195-21), (LCS 160-525244/2-A), (MB 160-525244/1-A), (160-43230-A-7-C), and (160-43230-A-7-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131

Job ID: 160-43195-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-525240:
The replicate precision for Bi-214/Ra-226 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for these statistical exceedances: (160-43195-A-20-D DU).

For samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), (LCS 160-525240/2-A), (MB 160-525240/1-A), and (160-43195-A-20-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63

Job ID: 160-43195-2 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/27/2021, prepared on 09/16/2021 and 09/20/2021 and analyzed on 09/24/2021, 09/25/2021 and 09/26/2021.

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

PLUTONIUM 241

Samples FSS-136-082421 (160-43195-19), FSS-137-082421 (160-43195-20), FSS-138-082421 (160-43195-21) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/12/2021 and 09/21/2021 and analyzed on 09/27/2021, 09/28/2021 and 09/30/2021.

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

Table 1. Job 160-43195-1 - Updated Sample IDs				
Project Sample Point	Lab sample ID	Initial Client Sample ID	Revised Client Sample ID	Results Reported in Job #
SU 7D - SS007 0"-6"	160-43195-19	FSS-133-082421	FSS-136-082421	160-43195-2
SU 7D - SS007 0"-6"	160-43195-22	FSS-136-082421	FSS-133-082421	160-43195-1
SU 7D - SS007 0"-6"	160-43195-22MS	FSS-136-082421MS	FSS-133-082421MS	160-43195-1
SU 7D - SS007 0"-6"	160-43195-22MSD	FSS-136-082421MSD	FSS-133-082421MSD	160-43195-1
SU 7D - SS007 6"-12"	160-43195-20	FSS-134-082421	FSS-137-082421	160-43195-2
SU 7D - SS007 6"-12"	160-43195-23	FSS-137-082421	FSS-134-082421	160-43195-1
SU 7D - SS007 6"-12"	160-43195-23MS	FSS-137-082421MS	FSS-134-082421MS	160-43195-1
SU 7D - SS007 6"-12"	160-43195-23MSD	FSS-137-082421MSD	FSS-134-082421MSD	160-43195-1
SU 7D - SS007 18"-24"	160-43195-21	FSS-135-082421	FSS-138-082421	160-43195-2
SU 7D - SS007 18"-24"	160-43195-24	FSS-138-082421	FSS-0135-082421	160-43195-1
SU 7D - SS007 18"-24"	160-43195-24MS	FSS-138-082421MS	FSS-0135-082421MS	160-43195-1
SU 7D - SS007 18"-24"	160-43195-24MSD	FSS-138-082421MSD	FSS-0135-082421MSD	160-43195-1

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___3___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-115-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 0"-6"
FSS-116-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 6"-12"
FSS-117-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS001 18"-24"
FSS-118-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 0"-6"
FSS-119-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 6"-12"
FSS-120-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS002 18"-24"
FSS-121-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 0"-6"
FSS-122-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 6"-12"
FSS-123-082421	24-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias North TB 18"-24"
FSS-124-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 0"-6"
FSS-125-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 6"-12"
FSS-126-082421	24-Aug	9:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS003 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by: Michia Kerschinger	Company: ETA SDL	Date/Time: AUG 25 2021
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-43195 Chain of Custody
Page 9 of 41

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-127-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 0"-6"
FSS-128-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 6"-12"
FSS-129-082421	24-Aug	8:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS004 18"-24"
FSS-130-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 0"-6"
FSS-131-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 6"-12"
FSS-132-082421	24-Aug	11:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS006 18"-24"
FSS-133-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 0"-6"
FSS-134-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 6"-12"
FSS-135-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 18"-24"
FSS-136-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 0"-6" Dup
FSS-137-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 6"-12" Dup
FSS-138-082421	24-Aug	14:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS007 18"-24" Dup

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kowinkiga	Company: ETA SL	Date/Time: AUG 25 2021
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-24-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	3 of 3 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-139-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 0"-6"
FSS-140-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 6"-12"
FSS-141-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 18"-24"
FSS-339-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 0"-6" Dup
FSS-340-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 6"-12" Dup
FSS-341-082421	24-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS009 18"-24" Dup
FSS-142-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 0"-6"
FSS-143-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 6"-12"
FSS-144-082421	24-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS008 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-24-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Micha Kominsky	Company: ETA	Date/Time: AUG 25 2021 08:33
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-115-082421 (160-43195-1)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-116-082421 (160-43195-2)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-117-082421 (160-43195-3)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-118-082421 (160-43195-4)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-119-082421 (160-43195-5)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-120-082421 (160-43195-6)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-121-082421 (160-43195-7)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-122-082421 (160-43195-8)	8/24/21	09:00 Eastern		Solid			X	X	X	1	
FSS-123-082421 (160-43195-9)	8/24/21	09:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Trisha Kennington	Date/Time: AUG 26 2021 19:00	Company: ETA STL	Received by:	Date/Time: 08/27/2021 0935	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.7, 3.0 IR1 / 1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-124-082421 (160-43195-10)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-125-082421 (160-43195-11)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-126-082421 (160-43195-12)	8/24/21	09:30 Eastern		Solid			X	X	X	1	
FSS-127-082421 (160-43195-13)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-128-082421 (160-43195-14)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-129-082421 (160-43195-15)	8/24/21	08:15 Eastern		Solid			X	X	X	1	
FSS-130-082421 (160-43195-16)	8/24/21	11:15 Eastern		Solid			X	X	X	1	
FSS-131-082421 (160-43195-17)	8/24/21	11:15 Eastern		Solid			X	X	X	1	
FSS-132-082421 (160-43195-18)	8/24/21	11:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Michael Kerrigan	AUG 26 2021 17:00	ETA SD			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				08/27/2021 0935	ETAMEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-133-082421 (160-43195-19)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-134-082421 (160-43195-20)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-135-082421 (160-43195-21)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-136-082421 (160-43195-22)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-137-082421 (160-43195-23)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-138-082421 (160-43195-24)	8/24/21	14:15 Eastern		Solid			X	X	X	1	
FSS-139-082421 (160-43195-25)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-140-082421 (160-43195-26)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-141-082421 (160-43195-27)	8/24/21	13:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Time: Method of Shipment:

Relinquished by: Micha Konschinzki	Date/Time: 08/26/2021 17:00	Company: ENV SCI	Received by: JOH	Date/Time: 08/27/2021 0935	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s)	COC No: 160-218247.4
Client Contact: Shipping/Receiving	Phone	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/6/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-339-082421 (160-43195-28)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-340-082421 (160-43195-29)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-341-082421 (160-43195-30)	8/24/21	13:45 Eastern		Solid			X	X	X	1	
FSS-142-082421 (160-43195-31)	8/24/21	13:15 Eastern		Solid			X	X	X	1	
FSS-143-082421 (160-43195-32)	8/24/21	13:15 Eastern		Solid			X	X	X	1	
FSS-144-082421 (160-43195-33)	8/24/21	13:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Micha Konchinzyl	AUG 26 2021 17:00	ETA SD		08/27/2021 0935	ETADEN
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

[redacted] eurofins Environment Testing America

A0H106327?-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218248.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd.	Due Date Requested: 10/7/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			Other:
Email:				
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5035 (Asbestos - PLM-EPA600-R-93/LAP-080.03)	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-115-082421 (160-43195-1)	8/24/21	08:15 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-116-082421 (160-43195-2)	8/24/21	08:15 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-117-082421 (160-43195-3)	8/24/21	08:15 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-118-082421 (160-43195-4)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-119-082421 (160-43195-5)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-120-082421 (160-43195-6)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-121-082421 (160-43195-7)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-122-082421 (160-43195-8)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-123-082421 (160-43195-9)	8/24/21	09:00 Eastern		Solid			X		1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by: Micha Kerrihings	Date/Time: AUG 26 2021 17:00	Company: ETA SL	Received by: Linda Maugan	Date/Time: 08-27-21 9:40am	Company: RJ Lee Group		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

A0H10632770

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vanse, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vanse@Eurofinset.com	State of Origin: New York	Page: Page 2 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd, .	Due Date Requested: 10/7/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-124-082421 (160-43195-10)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-125-082421 (160-43195-11)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-126-082421 (160-43195-12)	8/24/21	09:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-127-082421 (160-43195-13)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-128-082421 (160-43195-14)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-129-082421 (160-43195-15)	8/24/21	08:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-130-082421 (160-43195-16)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-131-082421 (160-43195-17)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-132-082421 (160-43195-18)	8/24/21	11:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification: Level 1 radioactive	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify): Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Micha Kominkiewicz	Date/Time: AUG 26 2021 17:00	Company: EA STL	Received by: Emily Mangan	Date/Time: 08/27/2021 9:40 AM	Company: RJ Lee Group	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

ADH1063297-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 3 of 4
Company: R.J Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd.	Due Date Requested: 10/7/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Organism, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Bulk (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-~~135~~136-082421 (160-43195-19)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~136~~137-082421 (160-43195-20)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~137~~138-082421 (160-43195-21)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~138~~133-082421 (160-43195-22)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~139~~134-082421 (160-43195-23)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-~~128~~135-082421 (160-43195-24)	8/24/21	14:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-139-082421 (160-43195-25)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-140-082421 (160-43195-26)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-141-082421 (160-43195-27)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification Level 1 radioactive	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)** ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date:	Time: Method of Shipment:
Relinquished by: Micha Kominsky Date/Time: 8/26/2021 17:00 Company: ETA SD	Received by: Vania Maugan Date/Time: 08/27/2021 9:40 Am Company: RJ Lee Group
Relinquished by: Date/Time: Company	Received by: Date/Time: Company
Relinquished by: Date/Time: Company	Received by: Date/Time: Company
Custody Seals Intact: Δ Yes Δ No Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 06-08-2021

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~~10154~~ 10152
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~~10149~~ 10148
~~10148~~ 10147

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH1063277-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.4
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 4 of 4
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43195-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/7/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			Other:
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-060.03)/ Asbestos - PLM-EPA600-R-93/LAP-060.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-339-082421 (160-43195-28)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-340-082421 (160-43195-29)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-341-082421 (160-43195-30)	8/24/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-142-082421 (160-43195-31)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-143-082421 (160-43195-32)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03
FSS-144-082421 (160-43195-33)	8/24/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-060.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification Level 1 radioactive	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Micha Kennington	Date/Time: AUG 26 2021 13:00	Company: EA STL	Received by: Linda Mangum	Date/Time: 08/27/21 9:40 AM	Company: RJ Lee Group	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-2

Login Number: 43195
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-2

Login Number: 43195
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/27/21 03:41 PM

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43195-2

Login Number: 43195
List Number: 3
Creator: Rystrom, Joshua R

List Source: Eurofins TestAmerica, Denver
List Creation: 10/13/21 09:50 AM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43195-2
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43195-19	FSS-136-082421	Solid	08/24/21 14:15	08/25/21 13:20
160-43195-20	FSS-137-082421	Solid	08/24/21 14:15	08/25/21 13:20
160-43195-21	FSS-138-082421	Solid	08/24/21 14:15	08/25/21 13:20

Client Sample ID: FSS-136-082421

Date Collected: 08/24/21 14:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-19

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.121	U J	0.139	0.139	3.00	0.275	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.8*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00888	U	0.201	0.201	1.00	0.366	pCi/g	09/20/21 15:14	09/28/21 00:01	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0292	U	0.0290	0.0291	1.00	0.108	pCi/g	09/11/21 11:55	09/20/21 20:54	1
Plutonium-239/240	-0.0478	U	0.0221	0.0224	1.00	0.115	pCi/g	09/11/21 11:55	09/20/21 20:54	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.1*		*30 - 110*	*09/11/21 11:55*	*09/20/21 20:54*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.296**		0.115	0.118	1.00	0.0786	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-235/236	0.0103	U	0.0410	0.0410	1.00	0.0978	pCi/g	09/12/21 17:44	09/20/21 11:58	1
Uranium-238	**0.270**		0.108	0.111	1.00	0.0618	pCi/g	09/12/21 17:44	09/20/21 11:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*65.7*		*30 - 110*	*09/12/21 17:44*	*09/20/21 11:58*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0779	U	0.600	0.600	5.00	1.06	pCi/g	09/24/21 08:07	09/28/21 07:59	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**1.19**		0.192	0.225		0.163	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Bismuth-212	0.228	U	0.621	0.621		1.11	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Bismuth-214	**0.624**		0.157	0.169		0.139	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Lead-212	**1.06**		0.134	0.172		0.126	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Lead-214	**0.705**		0.159	0.173		0.144	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Potassium-40	**6.64**		1.13	1.31		0.370	pCi/g	09/02/21 09:49	09/29/21 05:34	1

Client Sample ID: FSS-136-082421

Lab Sample ID: 160-43195-19
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.624**		0.157	0.169	1.00	0.139	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Thorium-232	**1.19**		0.192	0.225		0.163	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Americium-241	0.0789	U	0.208	0.208		0.356	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Cesium-137	-0.0462	U	0.0956	0.0957		0.165	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Cobalt-60	0.00832	U	0.0782	0.0782		0.0918	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Europium-152	0.110	U	0.193	0.194		0.202	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Europium-154	0.0266	U	0.141	0.141		0.160	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Europium-155	0.116	U	0.387	0.387		0.659	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Sodium-22	-0.0386	U	0.0613	0.0614		0.106	pCi/g	09/02/21 09:49	09/29/21 05:34	1
Zinc-65	-0.00503	U	0.174	0.174		0.315	pCi/g	09/02/21 09:49	09/29/21 05:34	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.18	U	1.03	1.04	5.00	1.75	pCi/g	09/20/21 14:05	09/26/21 01:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*78.5*		*40 - 110*	*09/20/21 14:05*	*09/26/21 01:42*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.710	U	1.84	1.84	5.00	2.73	pCi/g	09/12/21 17:46	09/28/21 02:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.1*		*30 - 110*	*09/12/21 17:46*	*09/28/21 02:55*	*1*

Client Sample ID: FSS-136-082421

Lab Sample ID: 160-43195-19
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 92.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.7**		0.32	0.019	mg/Kg	☼	09/16/21 07:48	09/16/21 21:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg	☼	09/18/21 15:00	09/19/21 15:34	1

Client Sample ID: FSS-137-082421

Lab Sample ID: 160-43195-20
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0183	U J	0.140	0.140	3.00	0.261	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Client Sample ID: FSS-137-082421

Date Collected: 08/24/21 14:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-20

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.7		40 - 110	09/19/21 19:37	10/05/21 18:12	1
Y Carrier	97.9		40 - 110	09/19/21 19:37	10/05/21 18:12	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0203	U	0.212	0.212	1.00	0.384	pCi/g	09/20/21 15:14	09/28/21 00:24	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0251	0.0251	1.00	0.0665	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00203	U	0.00398	0.00398	1.00	0.0393	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	99.4		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.263**		0.0954	0.0979	1.00	0.0705	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.000	U	0.00505	0.00505	1.00	0.0309	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.302**		0.0987	0.102	1.00	0.0463	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	97.4		30 - 110	09/12/21 17:59	09/20/21 11:34	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0357	U	0.780	0.780	5.00	1.39	pCi/g	09/24/21 08:07	09/28/21 08:22	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.508**		0.0999	0.112		0.0834	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Bismuth-212	-0.466	U	0.690	0.691		1.17	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Bismuth-214	0.0258	U	0.151	0.151		0.315	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Lead-212	**0.484**		0.0797	0.101		0.0759	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Lead-214	**0.356**		0.0871	0.0943		0.0835	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Potassium-40	**4.59**		0.879	0.992		0.591	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Radium-226	0.0258	U	0.151	0.151	1.00	0.315	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Thorium-232	**0.508**		0.0999	0.112		0.0834	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Americium-241	0.0570	U	0.122	0.122		0.208	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Cesium-137	0.0186	U	0.0488	0.0489		0.0858	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Cobalt-60	-0.00895	U	0.0604	0.0604		0.0705	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Europium-152	0.0601	U	0.0951	0.0953		0.150	pCi/g	09/02/21 09:49	09/28/21 23:21	1

Client Sample ID: FSS-137-082421

Lab Sample ID: 160-43195-20
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.00994	U	0.0561	0.0561		0.0983	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Europium-155	0.000	U	0.0868	0.0868		0.277	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Sodium-22	-0.0148	U	0.0447	0.0447		0.0811	pCi/g	09/02/21 09:49	09/28/21 23:21	1
Zinc-65	0.0132	U	0.106	0.106		0.194	pCi/g	09/02/21 09:49	09/28/21 23:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**1.96**		1.00	1.02	5.00	1.66	pCi/g	09/20/21 14:05	09/26/21 02:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.3*		*40 - 110*	*09/20/21 14:05*	*09/26/21 02:49*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.549	U	1.35	1.35	5.00	2.48	pCi/g	09/12/21 18:00	09/27/21 14:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.4*		*30 - 110*	*09/12/21 18:00*	*09/27/21 14:34*	*1*

Client Sample ID: FSS-137-082421

Lab Sample ID: 160-43195-20
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 95.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.3**		0.25	0.015	mg/Kg	☼	09/16/21 07:48	09/16/21 22:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/18/21 15:00	09/19/21 15:37	1

Client Sample ID: FSS-138-082421

Lab Sample ID: 160-43195-21
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0715	U J	0.177	0.177	3.00	0.310	pCi/g	09/19/21 19:37	10/05/21 18:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.5*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:12*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

Client Sample ID: FSS-138-082421

Date Collected: 08/24/21 14:15
Date Received: 08/25/21 13:20

Lab Sample ID: 160-43195-21

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00539	U	0.218	0.218	1.00	0.404	pCi/g	09/20/21 15:14	09/28/21 00:47	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0221	U	0.0205	0.0205	1.00	0.0765	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.0222	U	0.0125	0.0127	1.00	0.0693	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*108*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.188**		0.0795	0.0810	1.00	0.0418	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	0.0215	U	0.0298	0.0298	1.00	0.0322	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	**0.226**		0.0881	0.0900	1.00	0.0533	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*75.4*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.371	U	0.808	0.809	5.00	1.40	pCi/g	09/24/21 08:07	09/28/21 08:44	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.376**		0.109	0.115		0.162	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Bismuth-212	0.289	U	0.456	0.457		0.784	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Bismuth-214	**0.380**		0.101	0.108		0.0907	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Lead-212	0.0349	U	0.0838	0.0840		0.144	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Lead-214	**0.299**		0.0757	0.0815		0.0833	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Potassium-40	**4.43**		0.846	0.955		0.589	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Radium-226	**0.380**		0.101	0.108	1.00	0.0907	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Thorium-232	**0.376**		0.109	0.115		0.162	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Americium-241	0.0445	U	0.102	0.102		0.176	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Cesium-137	**0.0480**		0.0277	0.0281		0.0362	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Cobalt-60	-0.00605	U	0.0408	0.0408		0.0501	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-152	0.0559	U	0.0969	0.0971		0.118	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-154	0.0108	U	0.0492	0.0492		0.0863	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Europium-155	-0.000841	U	0.120	0.120		0.186	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Sodium-22	0.0152	U	0.0272	0.0272		0.0484	pCi/g	09/02/21 11:05	09/24/21 09:23	1
Zinc-65	-0.00839	U	0.108	0.108		0.197	pCi/g	09/02/21 11:05	09/24/21 09:23	1

Client Sample ID: FSS-138-082421
Lab Sample ID: 160-43195-21
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.42	U	0.936	0.947	5.00	1.56	pCi/g	09/20/21 14:05	09/26/21 03:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*83.3*		*40 - 110*	*09/20/21 14:05*	*09/26/21 03:56*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.213	U	1.31	1.31	5.00	2.38	pCi/g	09/12/21 18:00	09/27/21 15:41	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*108*		*30 - 110*	*09/12/21 18:00*	*09/27/21 15:41*	*1*

Client Sample ID: FSS-138-082421
Lab Sample ID: 160-43195-21
Date Collected: 08/24/21 14:15
Matrix: Solid
Date Received: 08/25/21 13:20
Percent Solids: 96.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.95**	**J1**	0.27	0.017	mg/Kg	☼	09/17/21 15:40	09/20/21 19:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/18/21 15:00	09/19/21 15:49	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-550205/1-A
Matrix: Solid
Analysis Batch: 550511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550205

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/17/21 15:40	09/20/21 19:13	1

Lab Sample ID: LCS 280-550205/2-A
Matrix: Solid
Analysis Batch: 550511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550205

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.7		mg/Kg		94	84 - 118

Lab Sample ID: 160-43195-21 MS
Matrix: Solid
Analysis Batch: 550511

Client Sample ID: FSS-138-082421
Prep Type: Total/NA
Prep Batch: 550205

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.95	J1	13.9	14.5		mg/Kg	☼	97	84 - 118

Lab Sample ID: 160-43195-21 MSD
Matrix: Solid
Analysis Batch: 550511

Client Sample ID: FSS-138-082421
Prep Type: Total/NA
Prep Batch: 550205

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.95	J1	18.8	18.6	J1	mg/Kg	☼	94	84 - 118	25	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-550161/1-A
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550161

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/18/21 15:00	09/19/21 15:44	1

Lab Sample ID: LCS 280-550161/2-A
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550161

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	339		ug/Kg		102	80 - 124

Lab Sample ID: 160-43195-21 MS
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: FSS-138-082421
Prep Type: Total/NA
Prep Batch: 550161

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	366	376		ug/Kg	☼	103	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43195-21 MSD
Matrix: Solid
Analysis Batch: 550342

Client Sample ID: FSS-138-082421
Prep Type: Total/NA
Prep Batch: 550161

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	366	376		ug/Kg	☼	103	80 - 124	0	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527618/1-A
Matrix: Solid
Analysis Batch: 530399

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527618

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.06126	U	0.152	0.152	3.00	0.267	pCi/g	09/19/21 19:37	10/05/21 18:06	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.8*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:06*	*1*
Y Carrier	*100*		*40 - 110*	*09/19/21 19:37*	*10/05/21 18:06*	*1*

Lab Sample ID: LCS 160-527618/2-A
Matrix: Solid
Analysis Batch: 530399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527618

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			15.2	6.886	J	0.713	3.00	0.240	pCi/g	45	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.8*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526536/1-A
Matrix: Solid
Analysis Batch: 527992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526536

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.02787	U	0.0317	0.0318	1.00	0.0446	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	-0.002477	U	0.00485	0.00486	1.00	0.0479	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	0.03973		0.0348	0.0350	1.00	0.0238	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*96.4*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-526536/2-A
Matrix: Solid
Analysis Batch: 527993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526536

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	7.112		0.749	1.00	0.0495	pCi/g	112	76 - 117
Uranium-238	6.51	6.848		0.726	1.00	0.0239	pCi/g	105	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*99.6*		*30 - 110*

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 527997

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 526536

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-233/234	0.263		0.2613		0.0989	1.00	0.0761	pCi/g	0.02	3
Uranium-235/236	0.000	U	0.02861	U	0.0358	1.00	0.0503	pCi/g	1.55	3
Uranium-238	0.302		0.1794		0.0783	1.00	0.0467	pCi/g	1.87	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*92.5*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 528234

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 526439

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Plutonium-238	0.000	U	-0.001989	U	0.00390	1.00	0.0385	pCi/g	0.15	3
Plutonium-239/240	-0.00203	U	-0.003983	U	0.00553	1.00	0.0446	pCi/g	0.56	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 529303

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 525240

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.508		0.4019		0.114		0.0690	pCi/g	1.30	2
Bismuth-212	-0.466	U	0.03024	U	0.572		1.04	pCi/g	1.08	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 529303

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 525240

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Bismuth-214	0.0258	U		0.3845		0.108		0.0735	pCi/g			3.78	2
Lead-212	0.484			0.4172		0.0870		0.0593	pCi/g			0.98	2
Lead-214	0.356			0.3710		0.0845		0.0622	pCi/g			0.24	2
Potassium-40	4.59			5.061		0.988		0.272	pCi/g			0.65	2
Radium-226	0.0258	U		0.3845		0.108	1.00	0.0735	pCi/g			3.78	2
Thorium-232	0.508			0.4019		0.114		0.0690	pCi/g			1.30	2
Americium-241	0.0570	U		0.05407	U	0.129		0.220	pCi/g			0.03	2
Cesium-137	0.0186	U		-0.02723	U	0.0452		0.0775	pCi/g			1.35	2
Cobalt-60	-0.00895	U		0.01202	U	0.00841		0.0505	pCi/g			0.67	2
Europium-152	0.0601	U		0.05483	U	0.145		0.140	pCi/g			0.06	2
Europium-154	0.00994	U		0.05061	U	0.0821		0.0955	pCi/g			0.80	2
Europium-155	0.000	U		0.02576	U	0.0962		0.394	pCi/g			0.39	2
Sodium-22	-0.0148	U		0.009428	U	0.0349		0.0650	pCi/g			0.84	2
Zinc-65	0.0132	U		0.03418	U	0.120		0.212	pCi/g			0.26	2

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526537/1-A
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526537

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.5613	U	1.51	1.51	5.00	2.81	pCi/g	09/12/21 18:00	09/27/21 13:27	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.7*		*30 - 110*	*09/12/21 18:00*	*09/27/21 13:27*	*1*

Lab Sample ID: LCS 160-526537/2-A
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526537

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	17.22		3.06	5.00	2.90	pCi/g	87	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*108*		*30 - 110*

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 526537

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.549	U		-0.5837	U	1.36	5.00	2.50	pCi/g			0.04	3

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: 160-43195-20 DU
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: FSS-137-082421
Prep Type: Total/NA
Prep Batch: 526537

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	100		30 - 110

Metals

Prep Batch: 549134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	3050B	
160-43195-20	FSS-137-082421	Total/NA	Solid	3050B	

Analysis Batch: 550156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	6020B	549134
160-43195-20	FSS-137-082421	Total/NA	Solid	6020B	549134

Prep Batch: 550158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	7471B	
160-43195-20	FSS-137-082421	Total/NA	Solid	7471B	

Prep Batch: 550161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-21	FSS-138-082421	Total/NA	Solid	7471B	
MB 280-550161/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-550161/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-43195-21 MS	FSS-138-082421	Total/NA	Solid	7471B	
160-43195-21 MSD	FSS-138-082421	Total/NA	Solid	7471B	

Prep Batch: 550205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-21	FSS-138-082421	Total/NA	Solid	3050B	
MB 280-550205/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-550205/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43195-21 MS	FSS-138-082421	Total/NA	Solid	3050B	
160-43195-21 MSD	FSS-138-082421	Total/NA	Solid	3050B	

Analysis Batch: 550342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	7471B	550158
160-43195-20	FSS-137-082421	Total/NA	Solid	7471B	550158
160-43195-21	FSS-138-082421	Total/NA	Solid	7471B	550161
MB 280-550161/1-A	Method Blank	Total/NA	Solid	7471B	550161
LCS 280-550161/2-A	Lab Control Sample	Total/NA	Solid	7471B	550161
160-43195-21 MS	FSS-138-082421	Total/NA	Solid	7471B	550161
160-43195-21 MSD	FSS-138-082421	Total/NA	Solid	7471B	550161

Analysis Batch: 550511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-21	FSS-138-082421	Total/NA	Solid	6020B	550205
MB 280-550205/1-A	Method Blank	Total/NA	Solid	6020B	550205
LCS 280-550205/2-A	Lab Control Sample	Total/NA	Solid	6020B	550205
160-43195-21 MS	FSS-138-082421	Total/NA	Solid	6020B	550205
160-43195-21 MSD	FSS-138-082421	Total/NA	Solid	6020B	550205

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

General Chemistry

Analysis Batch: 548659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	Moisture	
160-43195-20	FSS-137-082421	Total/NA	Solid	Moisture	
160-43195-21	FSS-138-082421	Total/NA	Solid	Moisture	
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	Moisture	

Rad

Leach Batch: 524351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	Dry and Grind	
160-43195-20	FSS-137-082421	Total/NA	Solid	Dry and Grind	
160-43195-21	FSS-138-082421	Total/NA	Solid	Dry and Grind	
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	Dry and Grind	

Prep Batch: 525240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-20	FSS-137-082421	Total/NA	Solid	Fill_Geo-21	524351
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	Fill_Geo-21	524351

Prep Batch: 525244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-21	FSS-138-082421	Total/NA	Solid	Fill_Geo-21	524351

Prep Batch: 526438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-20	FSS-137-082421	Total/NA	Solid	ExtChrom	524351
160-43195-21	FSS-138-082421	Total/NA	Solid	ExtChrom	524351
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	Leach_Precip	

Prep Batch: 526536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-20	FSS-137-082421	Total/NA	Solid	ExtChrom	524351
160-43195-21	FSS-138-082421	Total/NA	Solid	ExtChrom	524351
MB 160-526536/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526536/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	ExtChrom	524351

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

Rad

Prep Batch: 526537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-20	FSS-137-082421	Total/NA	Solid	Leach_Precip	
160-43195-21	FSS-138-082421	Total/NA	Solid	Leach_Precip	
MB 160-526537/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526537/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43195-20 DU	FSS-137-082421	Total/NA	Solid	Leach_Precip	

Prep Batch: 527618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	DPS-7	524351
160-43195-20	FSS-137-082421	Total/NA	Solid	DPS-7	524351
160-43195-21	FSS-138-082421	Total/NA	Solid	DPS-7	524351
MB 160-527618/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527618/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	

Prep Batch: 527686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-20	FSS-137-082421	Total/NA	Solid	Ext_Chrom_LSC	524351
160-43195-21	FSS-138-082421	Total/NA	Solid	Ext_Chrom_LSC	524351

Prep Batch: 527693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-20	FSS-137-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-21	FSS-138-082421	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-19	FSS-136-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-20	FSS-137-082421	Total/NA	Solid	LSC_Dist_Susp	
160-43195-21	FSS-138-082421	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43195-2

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43195-19	FSS-136-082421	86.8	97.9
160-43195-20	FSS-137-082421	83.7	97.9
160-43195-21	FSS-138-082421	81.5	96.1
LCS 160-527618/2-A	Lab Control Sample	89.8	101
MB 160-527618/1-A	Method Blank	88.8	100

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
160-43195-19	FSS-136-082421	68.1
160-43195-20	FSS-137-082421	99.4
160-43195-20 DU	FSS-137-082421	100
160-43195-21	FSS-138-082421	108

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	(30-110)
160-43195-19	FSS-136-082421	65.7
160-43195-20	FSS-137-082421	97.4
160-43195-20 DU	FSS-137-082421	92.5
160-43195-21	FSS-138-082421	75.4
LCS 160-526536/2-A	Lab Control Sample	99.6
MB 160-526536/1-A	Method Blank	96.4

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ni
Lab Sample ID	Client Sample ID	(40-110)
160-43195-19	FSS-136-082421	78.5
160-43195-20	FSS-137-082421	89.3
160-43195-21	FSS-138-082421	83.3

Tracer/Carrier Legend

Ni = Ni

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43195-2
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43195-19	FSS-136-082421	68.1							
160-43195-20	FSS-137-082421	99.4							
160-43195-20 DU	FSS-137-082421	100							
160-43195-21	FSS-138-082421	108							
LCS 160-526537/2-A	Lab Control Sample	108							
MB 160-526537/1-A	Method Blank	94.7							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

A-7.8
Samples FSS-088 through -090;
-136 through -138;
-145-152

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ANALYTICAL REPORT

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

Laboratory Job ID: 160-43220-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/12/2021 5:18:05 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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

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

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Job ID: 160-43220-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43220-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/26/2021 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 17.3º C and 24.0º C.

ASBESTOS

Job ID: 160-43220-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16), and FSS-090-081921 (160-43220-17) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared and analyzed on 09/23/2021.

Preparation Batch 280-549137:
Lead was detected in method blank MB 280-549137/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

MERCURY (CVAA)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/15/2021 and analyzed on 09/15/2021 and 09/16/2021.

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

PERCENT SOLIDS

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/02/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/27/2021, prepared on 09/20/2021 and analyzed on 10/04/2021 and 10/07/2021.

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

TRITIUM

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/24/2021, 09/27/2021 and 09/30/2021 and analyzed on 10/02/2021 and 10/03/2021.

Job ID: 160-43220-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/27/2021, prepared on 09/11/2021 and analyzed on 09/19/2021, 09/22/2021 and 09/23/2021.

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/27/2021, prepared on 09/12/2021 and analyzed on 09/20/2021, 09/21/2021 and 09/22/2021.

Preparation Batch 160-526536:
Uranium-238 was detected in method blank MB 160-526536/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

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

CARBON-14 BY LSC

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 10/04/2021 and analyzed on 10/05/2021.

Preparation Batch 160-530072:
Although, daily check are generally counted prior to sample counts, per calendar date, the daily checks for 10/5/2021 were successfully analyzed and were within QC criteria just after the samples completed counting. Bracketing daily checks were performed, both within acceptance and all batch QC were within parameters, indicating acceptable batch and instrument performance: FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16), FSS-090-081921 (160-43220-17), (LCS 160-530072/2-A), (MB 160-530072/1-A), (160-43220-B-1-Z DU), and (160-43220-B-1-AA MS).

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Radium-226 by gamma spec (21 day ingrowth)

Job ID: 160-43220-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

in accordance with EPA GA_01_R. The samples were leached on 08/27/2021, prepared on 08/31/2021 and analyzed on 09/29/2021 and 09/30/2021.

Preparation Batch 160-525011:
For samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16), FSS-090-081921 (160-43220-17), (160-43230-A-8-C), and (160-43230-A-8-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

NICKEL 59/63
Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15), FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/27/2021, prepared on 09/22/2021 and analyzed on 09/29/2021 and 09/30/2021.

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

PLUTONIUM 241
Samples FSS-136-082521 (160-43220-1), FSS-137-082521 (160-43220-2), FSS-138-082521 (160-43220-3), FSS-145-082521 (160-43220-4), FSS-146-082521 (160-43220-5), FSS-147-082521 (160-43220-6), FSS-148-082521 (160-43220-7), FSS-348-082521 (160-43220-8), FSS-149-082521 (160-43220-9), FSS-349-082521 (160-43220-10), FSS-150-082521 (160-43220-11), FSS-350-082521 (160-43220-12), FSS-151-082521 (160-43220-13), FSS-152-082521 (160-43220-14), FSS-088-081921 (160-43220-15),

Job ID: 160-43220-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

FSS-089-081921 (160-43220-16) and FSS-090-081921 (160-43220-17) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/12/2021 and analyzed on 09/27/2021, 09/28/2021, 10/01/2021 and 10/02/2021.

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-25-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	___1___ of ___2___ COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-136-082521	25-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS010 0"-6"
FSS-137-082521	25-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS010 6"-12"
FSS-138-082521	25-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS010 18"-24"
FSS-145-082521	25-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS012 0"-6"
FSS-146-082521	25-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS012 6"-12"
FSS-147-082521	25-Aug	8:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS012 18"-24"
FSS-148-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 0"-6"
FSS-348-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 0"-6" Dup
FSS-149-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 6"-12"
FSS-349-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 6"-12" Dup
FSS-150-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 18"-24"
FSS-350-082521	25-Aug	9:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS013 18"-24" Dup
FSS-151-082521	25-Aug	9:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS014 0"-6"
FSS-152-082521	25-Aug	9:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS014 6"-12"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____		
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-25-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: Fedex	Company:	Date/Time:	Received by: Sima Washington	Company: GTAST	Date/Time: 8-26-21 0900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-43220 Chain of Custody

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**	**Site Contact: Doug Beard**	**Date: 08-25-21**
FPM	Email: d.ours@fpm-remediations.com	**Lab Contact: Ivan Vania**	**Carrier: Fed Ex**
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**		
Oneida, NY 13421	**Analysis Turnaround Time**		
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS		
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days		
Project Name: BNL 705 Stack Demo	☐ 2 weeks		
Site: BNL	☐ 1 week		
P O # 1085-20-01-01	☐ 2 days		
	☐ 1 day		

COC No: ___2___ of ___2___ COCs
TALS Project #:
Sampler: J. Golliher
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-088-081921	25-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 0"-6"
FSS-089-081921	25-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 6"-12"
FSS-090-081921	19-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - SS011 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-25-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: Fedex	Company:	Date/Time:	Received by: Sina Wattington	Company: GTAST	Date/Time: 8-26-21 0900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s).	COC No. 280-586800.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2 | 2 TC 09/28/2021
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43220-1
Address: 13715 Rider Trail North,	Due Date Requested: 8/30/2021			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)
Other:	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	GA_01_R_RaDiv_Grind (NORM type list)	GA_01_W_RadVol_Liq_21 (NORM type list)	905_Sr90/Dry_Grind Strontium-90 (GFPC)	905_Sr90/DP8_7 Strontium-90 (GFPC)	A01R_PuDry_Grind Plutonium 238 and 239/240 (Alpha Spectro	A01R_PuExtChrom_Actin Plutonium-238 and 239/240 (Alpha Spectro	L8C_Pu241_Leach_Precip (MDD) Copy Analytes	A01R_UlDry_Grind Standard Target List	A01R_UlExtChrom_Actin Standard Target List	906.0/L8C_Dist_Susp Tritium (LSC)	C_01_1/L8C_Dist_Susp	L8C_NiDry_Grind Nickel-63 (L8C)	L8C_NiExt_Chrom_L8C Nickel-63 (L8C)	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
FSS-136-082521 (160-43220-1)	8/25/21	13:45 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	. 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native. 1.96 Sigma, DER<3
FSS-137-082521 (160-43220-2)	8/25/21	13:45 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	. 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native. 1.96 Sigma, DER<3
FSS-138-082521 (160-43220-3)	8/25/21	13:45 Eastern		Solid			X	X	X	X	X	X	X	X	X	X	X	X	X	1	. 1.96 Sigma, DER<3, Log ICP_Carriers and ICP_Native. 1.96 Sigma, DER<3
																					* Extra Volume requested. TC 09/28/2021

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: FED EX	Date/Time: 9/28/21 1440	Company:	Received by: FED EX	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by: Micha Konnings	Date/Time: 9/30/21 08:47	Company: EDA SDC
Relinquished by	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No		3.4° (+0.7)

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218247.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43220-1
Address: 4955 Yarrow Street.	Due Date Requested: 10/7/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002	PO #:			
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-136-082521 (160-43220-1)	8/25/21	13:45 Eastern		Solid			X	X	X	1	
FSS-137-082521 (160-43220-2)	8/25/21	13:45 Eastern		Solid			X	X	X	1	
FSS-138-082521 (160-43220-3)	8/25/21	13:45 Eastern		Solid			X	X	X	1	
FSS-145-082521 (160-43220-4)	8/25/21	08:45 Eastern		Solid			X	X	X	1	
FSS-146-082521 (160-43220-5)	8/25/21	08:45 Eastern		Solid			X	X	X	1	
FSS-147-082521 (160-43220-6)	8/25/21	08:45 Eastern		Solid			X	X	X	1	
FSS-148-082521 (160-43220-7)	8/25/21	09:15 Eastern		Solid			X	X	X	1	
FSS-348-082521 (160-43220-8)	8/25/21	09:15 Eastern		Solid			X	X	X	1	
FSS-149-082521 (160-43220-9)	8/25/21	09:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Micha Kowalinski	Date/Time: AUG 26 2021 17:00	Company: ETA SL	Received by: [signature] Date/Time: 08/27/2021 0935 Company: ETA-DEN
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: Company:
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: Company:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 1.7, 3.0 IR11+1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s)	COC No: 160-218247.2
Client Contact: Shipping/Receiving	Phone	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43220-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/7/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #			
Email:	WO #			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-349-082521 (160-43220-10)	8/25/21	09:15 Eastern		Solid			X	X	X	1	
FSS-150-082521 (160-43220-11)	8/25/21	09:15 Eastern		Solid			X	X	X	1	
FSS-350-082521 (160-43220-12)	8/25/21	09:15 Eastern		Solid			X	X	X	1	
FSS-151-082521 (160-43220-13)	8/25/21	09:45 Eastern		Solid			X	X	X	1	
FSS-152-082521 (160-43220-14)	8/25/21	09:45 Eastern		Solid			X	X	X	1	
FSS-088-081921 (160-43220-15)	8/25/21	14:00 Eastern		Solid			X	X	X	1	
FSS-089-081921 (160-43220-16)	8/25/21	14:00 Eastern		Solid			X	X	X	1	
FSS-090-081921 (160-43220-17)	8/19/21	14:00 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Micha Kominger	AUG 26 2021 17:00	ETA SL		08/27/2021 0935	ETA/DEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH1063271-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218246.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43220-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/8/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #:			
Phone:	WO #:			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5128 (Asbestos - PLM-EPA600-R-93/LAP-080.03) Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-136-082521 (160-43220-1)	8/25/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-137-082521 (160-43220-2)	8/25/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-138-082521 (160-43220-3)	8/25/21	13:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-145-082521 (160-43220-4)	8/25/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-146-082521 (160-43220-5)	8/25/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-147-082521 (160-43220-6)	8/25/21	08:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-148-082521 (160-43220-7)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-348-082521 (160-43220-8)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-149-082521 (160-43220-9)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Richard Kerrigan	Date/Time: 8/26/2021 17:00	Company: EA STL	Received by: Linda Maugus
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Received by: Linda Maugus	Date/Time: 08-27-2021 9:40	Company: RJ Lee Group	
Received by:	Date/Time:	Company:	
Received by:	Date/Time:	Company:	

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

eurofins

Chain of Custody Record

Acct 10632 81-0

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s)	COC No: 160-218246.2
Client Contact: Shipping/Receiving	Phone	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43220-1
Address: 350 Hochberg Rd.	Due Date Requested: 10/8/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146	PO #			
Phone:	WO #			
Email:	Project #: 16009147			
Project Name: BNL Decommissioning Project	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-349-082521 (160-43220-10)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-150-082521 (160-43220-11)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-350-082521 (160-43220-12)	8/25/21	09:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-151-082521 (160-43220-13)	8/25/21	09:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-152-082521 (160-43220-14)	8/25/21	09:45 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-088-081921 (160-43220-15)	8/25/21	14:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-089-081921 (160-43220-16)	8/25/21	14:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-090-081921 (160-43220-17)	8/19/21	14:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Mischa Vonderheyer	Date/Time: 8/26/21 17:00	Company: EMSL	Received by: Linda Mangum	Date/Time: 08/27/2021 9:40am	Company: RJ Lee Group	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43220-1

Login Number: 43220
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43220-1

Login Number: 43220
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/27/21 03:38 PM

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

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43220-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43220-1	FSS-136-082521	Solid	08/25/21 13:45	08/26/21 09:00
160-43220-2	FSS-137-082521	Solid	08/25/21 13:45	08/26/21 09:00
160-43220-3	FSS-138-082521	Solid	08/25/21 13:45	08/26/21 09:00
160-43220-4	FSS-145-082521	Solid	08/25/21 08:45	08/26/21 09:00
160-43220-5	FSS-146-082521	Solid	08/25/21 08:45	08/26/21 09:00
160-43220-6	FSS-147-082521	Solid	08/25/21 08:45	08/26/21 09:00
160-43220-7	FSS-148-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-8	FSS-348-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-9	FSS-149-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-10	FSS-349-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-11	FSS-150-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-12	FSS-350-082521	Solid	08/25/21 09:15	08/26/21 09:00
160-43220-13	FSS-151-082521	Solid	08/25/21 09:45	08/26/21 09:00
160-43220-14	FSS-152-082521	Solid	08/25/21 09:45	08/26/21 09:00
160-43220-15	FSS-088-081921	Solid	08/25/21 14:00	08/26/21 09:00
160-43220-16	FSS-089-081921	Solid	08/25/21 14:00	08/26/21 09:00
160-43220-17	FSS-090-081921	Solid	08/19/21 14:00	08/26/21 09:00

Client Sample ID: FSS-136-082521

Date Collected: 08/25/21 13:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.266	U	0.182	0.183	3.00	0.289	pCi/g	09/20/21 10:28	10/04/21 17:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.9*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:26*	*1*
Y Carrier	*98.3*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:26*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.158	U	0.189	0.189	1.00	0.324	pCi/g	09/30/21 12:18	10/03/21 02:11	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00421	0.00421	1.00	0.0258	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.000	U	0.00421	0.00421	1.00	0.0258	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.8*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.242**		0.0905	0.0927	1.00	0.0529	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	**0.0319**		0.0361	0.0362	1.00	0.0319	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.186**		0.0786	0.0800	1.00	0.0413	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*78.2*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:37*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0501	U	0.885	0.885	5.00	1.56	pCi/g	10/04/21 14:52	10/05/21 04:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.185	U	0.153	0.155		0.208	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Bismuth-212	-0.401	U	0.761	0.762		1.31	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Bismuth-214	0.0597	U	0.0648	0.0651		0.264	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Lead-212	**0.298**		0.0675	0.0773		0.0766	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Lead-214	**0.351**		0.0916	0.0983		0.0818	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Potassium-40	**3.82**		0.801	0.887		0.579	pCi/g	08/31/21 16:48	09/29/21 10:59	1

Client Sample ID: FSS-136-082521

Lab Sample ID: 160-43220-1
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0597	U	0.0648	0.0651	1.00	0.264	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Thorium-232	0.185	U	0.153	0.155		0.208	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Cesium-137	**0.101**		0.0439	0.0451		0.0582	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Europium-152	**0.234**		0.0733	0.0772		0.141	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Europium-154	0.0441	U	0.0626	0.0628		0.0991	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Europium-155	-0.00288	U	0.00700	0.00700		0.367	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Sodium-22	-0.00846	U	0.0355	0.0355		0.0667	pCi/g	08/31/21 16:48	09/29/21 10:59	1
Zinc-65	0.000	U	0.0178	0.0178		0.216	pCi/g	08/31/21 16:48	09/29/21 10:59	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.97	U	1.47	1.49	5.00	2.41	pCi/g	09/22/21 10:22	09/29/21 23:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*77.5*		*40 - 110*	*09/22/21 10:22*	*09/29/21 23:42*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.411	U	1.75	1.75	5.00	3.19	pCi/g	09/12/21 18:00	09/27/21 22:57	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*78.8*		*30 - 110*	*09/12/21 18:00*	*09/27/21 22:57*	*1*

Client Sample ID: FSS-136-082521

Lab Sample ID: 160-43220-1
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 94.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.8**		0.26	0.015	mg/Kg	☼	09/23/21 14:40	09/23/21 21:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg	☼	09/15/21 15:00	09/16/21 12:13	1

Client Sample ID: FSS-137-082521

Lab Sample ID: 160-43220-2
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.265	U	0.200	0.201	3.00	0.322	pCi/g	09/20/21 10:28	10/04/21 17:26	1

Client Sample ID: FSS-137-082521

Date Collected: 08/25/21 13:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-2

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.8		40 - 110	09/20/21 10:28	10/04/21 17:26	1
Y Carrier	94.2		40 - 110	09/20/21 10:28	10/04/21 17:26	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.205	U	0.190	0.191	1.00	0.314	pCi/g	09/30/21 12:18	10/03/21 02:34	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00636	U	0.0171	0.0171	1.00	0.0410	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.000	U	0.00416	0.00416	1.00	0.0255	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	82.4		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.278**		0.0959	0.0986	1.00	0.0518	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	0.0182	U	0.0293	0.0294	1.00	0.0504	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.330**		0.104	0.107	1.00	0.0468	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	82.4		30 - 110	09/12/21 17:59	09/20/21 11:37	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.203	U	0.736	0.736	5.00	1.27	pCi/g	10/04/21 14:52	10/05/21 05:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.138	U	0.123	0.124		0.207	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Bismuth-212	0.211	U	0.395	0.396		0.702	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Bismuth-214	**0.241**		0.108	0.111		0.120	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Lead-212	**0.257**		0.0696	0.0769		0.0755	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Lead-214	**0.258**		0.0854	0.0893		0.121	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Potassium-40	**3.02**		0.865	0.916		0.799	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Radium-226	**0.241**		0.108	0.111	1.00	0.120	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Thorium-232	0.138	U	0.123	0.124		0.207	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Cesium-137	0.0291	U	0.0610	0.0611		0.107	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-152	0.0779	U	0.141	0.141		0.163	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-154	0.0283	U	0.0423	0.0424		0.127	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-155	0.0313	U	0.0973	0.0973		0.358	pCi/g	08/31/21 16:48	09/29/21 11:00	1

Client Sample ID: FSS-137-082521
Lab Sample ID: 160-43220-2
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	0.000	U	0.00946	0.00946		0.0356	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Zinc-65	0.0516	U	0.107	0.107		0.189	pCi/g	08/31/21 16:48	09/29/21 11:00	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.89**		1.73	1.76	5.00	2.78	pCi/g	09/22/21 10:22	09/30/21 00:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*66.0*		*40 - 110*	*09/22/21 10:22*	*09/30/21 00:16*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.61	U	1.77	1.77	5.00	3.52	pCi/g	09/12/21 18:00	09/27/21 23:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.4*		*30 - 110*	*09/12/21 18:00*	*09/27/21 23:30*	*1*

Client Sample ID: FSS-137-082521
Lab Sample ID: 160-43220-2
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 96.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.7**		0.22	0.014	mg/Kg	☼	09/23/21 14:40	09/23/21 21:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	16	U	20	6.5	ug/Kg	☼	09/15/21 15:00	09/15/21 19:42	1

Client Sample ID: FSS-138-082521
Lab Sample ID: 160-43220-3
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.272	U	0.195	0.196	3.00	0.312	pCi/g	09/20/21 10:28	10/04/21 18:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.6*		*40 - 110*	*09/20/21 10:28*	*10/04/21 18:02*	*1*
Y Carrier	*94.6*		*40 - 110*	*09/20/21 10:28*	*10/04/21 18:02*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Client Sample ID: FSS-138-082521

Date Collected: 08/25/21 13:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-3

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.201	U	0.186	0.187	1.00	0.305	pCi/g	09/30/21 12:18	10/03/21 02:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0137	U	0.0220	0.0220	1.00	0.0378	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00586	U	0.00663	0.00665	1.00	0.0483	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.1*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.194**		0.0825	0.0840	1.00	0.0755	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-235/236	0.00244	U	0.0208	0.0208	1.00	0.0603	pCi/g	09/12/21 17:59	09/20/21 11:37	1
Uranium-238	**0.299**		0.0975	0.101	1.00	0.0615	pCi/g	09/12/21 17:59	09/20/21 11:37	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.7*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:37*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0365	U	0.657	0.657	5.00	1.16	pCi/g	10/04/21 14:52	10/05/21 06:14	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.309**		0.196	0.198		0.222	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Bismuth-212	0.323	U	0.601	0.602		1.04	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Bismuth-214	**0.288**		0.109	0.113		0.116	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Lead-212	**0.273**		0.0718	0.0797		0.0845	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Lead-214	**0.236**		0.0862	0.0895		0.109	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Potassium-40	**3.17**		0.820	0.879		0.708	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Radium-226	**0.288**		0.109	0.113	1.00	0.116	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Thorium-232	**0.309**		0.196	0.198		0.222	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Cesium-137	-0.000509	U	0.0634	0.0634		0.0820	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-152	0.0650	U	0.128	0.128		0.152	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-154	0.0485	U	0.103	0.103		0.108	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-155	-0.0714	U	0.127	0.127		0.347	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Sodium-22	0.0243	U	0.0339	0.0340		0.0577	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Zinc-65	0.000	U	0.0212	0.0212		0.202	pCi/g	08/31/21 16:48	09/29/21 12:47	1

Client Sample ID: FSS-138-082521

Lab Sample ID: 160-43220-3
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.24	U	1.60	1.61	5.00	2.62	pCi/g	09/22/21 10:22	09/30/21 00:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*72.5*		*40 - 110*	*09/22/21 10:22*	*09/30/21 00:49*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.624	U	1.63	1.64	5.00	3.02	pCi/g	09/12/21 18:00	09/28/21 00:04	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.1*		*30 - 110*	*09/12/21 18:00*	*09/28/21 00:04*	*1*

Client Sample ID: FSS-138-082521

Lab Sample ID: 160-43220-3
Date Collected: 08/25/21 13:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 95.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.3**		0.25	0.015	mg/Kg	☼	09/23/21 14:40	09/23/21 21:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/15/21 15:00	09/15/21 19:45	1

Client Sample ID: FSS-145-082521

Lab Sample ID: 160-43220-4
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.480**		0.207	0.211	3.00	0.299	pCi/g	09/20/21 10:28	10/04/21 17:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.8*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:27*	*1*
Y Carrier	*95.3*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:27*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.173	U	0.185	0.186	1.00	0.309	pCi/g	09/27/21 11:23	10/03/21 00:41	1

Client Sample ID: FSS-145-082521

Date Collected: 08/25/21 08:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-4

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00628	U	0.00711	0.00713	1.00	0.0518	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.00419	U	0.0174	0.0174	1.00	0.0470	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.0*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.260**		0.0919	0.0944	1.00	0.0543	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-235/236	**0.0582**		0.0488	0.0491	1.00	0.0490	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-238	**0.258**		0.0918	0.0942	1.00	0.0577	pCi/g	09/12/21 17:59	09/21/21 10:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*99.2*		*30 - 110*	*09/12/21 17:59*	*09/21/21 10:06*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.428	U	0.774	0.775	5.00	1.41	pCi/g	10/04/21 14:52	10/05/21 06:37	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.516**		0.157	0.165		0.135	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Bismuth-212	0.382	U	0.627	0.628		1.08	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Bismuth-214	**0.368**		0.111	0.117		0.107	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Lead-212	**0.416**		0.0809	0.0966		0.0786	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Lead-214	**0.383**		0.110	0.116		0.134	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Potassium-40	**5.06**		1.01	1.13		0.724	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Radium-226	**0.368**		0.111	0.117	1.00	0.107	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Thorium-232	**0.516**		0.157	0.165		0.135	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Cesium-137	**0.537**		0.0849	0.101		0.0376	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-152	0.0551	U	0.0891	0.0893		0.139	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-154	0.0600	U	0.0920	0.0922		0.108	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-155	0.0135	U	0.0324	0.0325		0.404	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Sodium-22	**0.0482**		0.0285	0.0288		0.0323	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Zinc-65	-0.115	U	0.187	0.188		0.320	pCi/g	08/31/21 16:48	09/29/21 11:35	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.86	U	1.56	1.57	5.00	2.60	pCi/g	09/22/21 10:22	09/30/21 01:23	1

Client Sample ID: FSS-145-082521

Lab Sample ID: 160-43220-4
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	72.4		40 - 110	09/22/21 10:22	09/30/21 01:23	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.404	U	1.66	1.66	5.00	2.88	pCi/g	09/12/21 18:00	09/28/21 00:37	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	85.0		30 - 110	09/12/21 18:00	09/28/21 00:37	1

Client Sample ID: FSS-145-082521

Lab Sample ID: 160-43220-4
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 93.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	12		0.29	0.017	mg/Kg	☼	09/23/21 14:40	09/23/21 22:02	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	47		21	6.8	ug/Kg	☼	09/15/21 15:00	09/15/21 19:47	1

Client Sample ID: FSS-146-082521

Lab Sample ID: 160-43220-5
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.223	U	0.179	0.180	3.00	0.290	pCi/g	09/20/21 16:47	10/07/21 20:39	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.0		40 - 110	09/20/21 16:47	10/07/21 20:39	1
Y Carrier	98.7		40 - 110	09/20/21 16:47	10/07/21 20:39	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.161	U	0.193	0.193	1.00	0.329	pCi/g	09/27/21 11:23	10/03/21 01:03	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00195	U	0.00383	0.00383	1.00	0.0378	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	-0.00195	U	0.00383	0.00383	1.00	0.0378	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	90.3		30 - 110	09/11/21 12:57	09/19/21 23:44	1

Client Sample ID: FSS-146-082521

Date Collected: 08/25/21 08:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-5

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.251**		0.0902	0.0926	1.00	0.0598	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-235/236	0.00744	U	0.0200	0.0200	1.00	0.0480	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-238	**0.157**		0.0719	0.0731	1.00	0.0566	pCi/g	09/12/21 17:59	09/21/21 10:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*99.7*		*30 - 110*	*09/12/21 17:59*	*09/21/21 10:06*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.157	U	0.841	0.841	5.00	1.49	pCi/g	10/04/21 14:52	10/05/21 06:59	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.443**		0.132	0.139		0.0813	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Bismuth-212	0.343	U	0.551	0.552		0.946	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Bismuth-214	**0.348**		0.0950	0.101		0.100	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Lead-212	**0.451**		0.0758	0.0950		0.0719	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Lead-214	**0.418**		0.0839	0.0941		0.0924	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Potassium-40	**4.25**		0.837	0.940		0.576	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Radium-226	**0.348**		0.0950	0.101	1.00	0.100	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Thorium-232	**0.443**		0.132	0.139		0.0813	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Cesium-137	**0.208**		0.0576	0.0614		0.0669	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Europium-152	**0.163**		0.0858	0.0875		0.132	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Europium-154	-0.0383	U	0.0690	0.0691		0.118	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Europium-155	0.000	U	0.0936	0.0936		0.411	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Sodium-22	0.0132	U	0.0377	0.0377		0.0688	pCi/g	08/31/21 16:48	09/29/21 13:19	1
Zinc-65	-0.00806	U	0.118	0.118		0.214	pCi/g	08/31/21 16:48	09/29/21 13:19	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.845	U	0.946	0.950	5.00	1.58	pCi/g	09/22/21 10:22	09/30/21 02:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*109*		*40 - 110*	*09/22/21 10:22*	*09/30/21 02:30*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.389	U	1.74	1.74	5.00	3.13	pCi/g	09/12/21 18:00	09/28/21 01:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.3*		*30 - 110*	*09/12/21 18:00*	*09/28/21 01:11*	*1*

Client Sample ID: FSS-146-082521

Lab Sample ID: 160-43220-5
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 91.5

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.6		0.29	0.018	mg/Kg	☼	09/23/21 14:40	09/23/21 22:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	56		21	7.0	ug/Kg	☼	09/15/21 15:00	09/15/21 19:50	1

Client Sample ID: FSS-147-082521

Lab Sample ID: 160-43220-6
Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.102	U	0.145	0.145	3.00	0.283	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.6*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.215	U	0.199	0.200	1.00	0.327	pCi/g	09/27/21 11:23	10/03/21 01:26	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0158	U	0.0279	0.0279	1.00	0.0527	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.00592	U	0.0159	0.0160	1.00	0.0382	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.9*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.208		0.0917	0.0933	1.00	0.0876	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-235/236	-0.00276	U	0.0248	0.0248	1.00	0.0785	pCi/g	09/12/21 17:59	09/21/21 10:06	1
Uranium-238	0.166		0.0757	0.0769	1.00	0.0428	pCi/g	09/12/21 17:59	09/21/21 10:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*73.8*		*30 - 110*	*09/12/21 17:59*	*09/21/21 10:06*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.468	U	0.931	0.932	5.00	1.58	pCi/g	10/04/21 14:52	10/05/21 07:22	1

Client Sample ID: FSS-147-082521

Lab Sample ID: 160-43220-6

Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.251**		0.119	0.122		0.190	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Bismuth-212	0.418	U	0.740	0.741		1.27	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Bismuth-214	**0.220**		0.0826	0.0856		0.0920	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Lead-212	**0.327**		0.0669	0.0787		0.0741	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Lead-214	**0.289**		0.0791	0.0844		0.0771	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Potassium-40	**2.94**		0.681	0.743		0.531	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Radium-226	**0.220**		0.0826	0.0856	1.00	0.0920	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Thorium-232	**0.251**		0.119	0.122		0.190	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Cesium-137	**0.152**		0.0447	0.0473		0.0376	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Europium-152	0.0637	U	0.114	0.114		0.127	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Europium-154	0.0749	U	0.0392	0.0400		0.0898	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Europium-155	-0.0513	U	0.225	0.225		0.384	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Sodium-22	-0.00443	U	0.0319	0.0319		0.0611	pCi/g	08/31/21 16:48	09/29/21 11:33	1
Zinc-65	0.000	U	0.0231	0.0231		0.165	pCi/g	08/31/21 16:48	09/29/21 11:33	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.14	U	1.35	1.37	5.00	2.18	pCi/g	09/22/21 10:22	09/30/21 03:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.1*		*40 - 110*	*09/22/21 10:22*	*09/30/21 03:03*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.272	U	1.62	1.62	5.00	2.97	pCi/g	09/12/21 18:00	09/28/21 01:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*87.9*		*30 - 110*	*09/12/21 18:00*	*09/28/21 01:44*	*1*

Client Sample ID: FSS-147-082521

Lab Sample ID: 160-43220-6

Date Collected: 08/25/21 08:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 86.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.4**		0.33	0.020	mg/Kg	☼	09/23/21 14:40	09/23/21 22:09	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**69**		20	6.5	ug/Kg	☼	09/15/21 15:00	09/15/21 19:52	1

Client Sample ID: FSS-148-082521

Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-7

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0201	U	0.146	0.146	3.00	0.265	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.3*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.111	U	0.178	0.178	1.00	0.309	pCi/g	09/27/21 11:23	10/03/21 01:49	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0313	U	0.0391	0.0392	1.00	0.0642	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.00588	U	0.0158	0.0158	1.00	0.0379	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.212**		0.0853	0.0871	1.00	0.0669	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.0558	U	0.0492	0.0494	1.00	0.0568	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.313**		0.0998	0.103	1.00	0.0456	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.0*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.201	U	0.783	0.783	5.00	1.35	pCi/g	10/04/21 14:52	10/05/21 07:44	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.437**		0.104	0.112		0.0661	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Bismuth-212	0.164	U	0.356	0.356		0.632	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Bismuth-214	**0.261**		0.0848	0.0889		0.0725	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Lead-212	**0.420**		0.0681	0.0864		0.0589	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Lead-214	**0.391**		0.0831	0.0921		0.0583	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Potassium-40	**4.17**		0.753	0.862		0.261	pCi/g	08/31/21 16:48	09/29/21 11:01	1

Client Sample ID: FSS-148-082521

Lab Sample ID: 160-43220-7
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.261**		0.0848	0.0889	1.00	0.0725	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Thorium-232	**0.437**		0.104	0.112		0.0661	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Cesium-137	**0.137**		0.0407	0.0431		0.0283	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Europium-152	-0.0476	U	0.0851	0.0852		0.145	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Europium-154	**0.127**		0.0532	0.0548		0.0963	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Europium-155	-0.00000000629	U	0.191	0.191		0.331	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Sodium-22	-0.0327	U	0.0492	0.0493		0.0843	pCi/g	08/31/21 16:48	09/29/21 11:01	1
Zinc-65	-0.0811	U	0.137	0.138		0.236	pCi/g	08/31/21 16:48	09/29/21 11:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.57	U	1.37	1.38	5.00	2.26	pCi/g	09/22/21 10:22	09/30/21 03:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*75.7*		*40 - 110*	*09/22/21 10:22*	*09/30/21 03:37*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.51	U	1.28	1.29	5.00	2.49	pCi/g	09/12/21 17:54	10/01/21 02:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/12/21 17:54*	*10/01/21 02:51*	*1*

Client Sample ID: FSS-148-082521

Lab Sample ID: 160-43220-7
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 95.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**9.2**		0.27	0.016	mg/Kg	☼	09/23/21 14:40	09/23/21 22:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**68**		18	5.9	ug/Kg	☼	09/15/21 15:00	09/15/21 19:55	1

Client Sample ID: FSS-348-082521

Lab Sample ID: 160-43220-8
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.149	U	0.175	0.175	3.00	0.295	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Client Sample ID: FSS-348-082521

Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-8

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.0		40 - 110	09/20/21 16:47	10/07/21 20:42	1
Y Carrier	102		40 - 110	09/20/21 16:47	10/07/21 20:42	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.279	U	0.198	0.199	1.00	0.313	pCi/g	09/24/21 17:21	10/02/21 20:09	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0238	U	0.0220	0.0221	1.00	0.0821	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	-0.0159	U	0.0206	0.0206	1.00	0.0744	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	102		30 - 110	09/11/21 14:30	09/22/21 11:30	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.263**		0.0901	0.0926	1.00	0.0517	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.0265	U	0.0330	0.0331	1.00	0.0466	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.322**		0.0996	0.103	1.00	0.0549	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	106		30 - 110	09/12/21 17:52	09/22/21 15:44	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0525	U	0.926	0.926	5.00	1.62	pCi/g	10/04/21 14:52	10/05/21 08:07	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.392**		0.297	0.300		0.318	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Bismuth-212	0.000	U	0.659	0.659		1.42	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Bismuth-214	**0.324**		0.125	0.129		0.135	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Lead-212	**0.304**		0.0867	0.0921		0.108	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Lead-214	**0.308**		0.113	0.117		0.122	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Potassium-40	**4.19**		0.919	1.01		0.386	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Radium-226	**0.324**		0.125	0.129	1.00	0.135	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Thorium-232	**0.392**		0.297	0.300		0.318	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Cesium-137	0.0423	U	0.0764	0.0766		0.132	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-152	0.128	U	0.186	0.186		0.165	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-154	0.0148	U	0.0203	0.0203		0.141	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Europium-155	0.0373	U	0.0429	0.0431		0.598	pCi/g	08/31/21 16:48	09/29/21 11:00	1

Client Sample ID: FSS-348-082521
Lab Sample ID: 160-43220-8
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	-0.0218	U	0.0512	0.0513		0.0925	pCi/g	08/31/21 16:48	09/29/21 11:00	1
Zinc-65	0.000	U	0.0557	0.0557		0.279	pCi/g	08/31/21 16:48	09/29/21 11:00	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.55	U	1.28	1.29	5.00	2.14	pCi/g	09/22/21 10:22	09/30/21 04:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*89.9*		*40 - 110*	*09/22/21 10:22*	*09/30/21 04:11*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.17	U	1.28	1.29	5.00	2.42	pCi/g	09/12/21 17:54	10/01/21 03:58	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*102*		*30 - 110*	*09/12/21 17:54*	*10/01/21 03:58*	*1*

Client Sample ID: FSS-348-082521
Lab Sample ID: 160-43220-8
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 96.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.9**		0.27	0.017	mg/Kg	☼	09/23/21 14:40	09/23/21 22:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**47**		18	5.9	ug/Kg	☼	09/15/21 15:00	09/15/21 19:57	1

Client Sample ID: FSS-149-082521
Lab Sample ID: 160-43220-9
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0215	U	0.129	0.129	3.00	0.242	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.7*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Client Sample ID: FSS-149-082521

Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-9

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.236	U	0.194	0.195	1.00	0.314	pCi/g	09/24/21 17:21	10/02/21 20:32	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0110	U	0.0209	0.0209	1.00	0.0409	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.00548	U	0.0148	0.0148	1.00	0.0354	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.383**		0.112	0.117	1.00	0.0618	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.00769	U	0.0207	0.0207	1.00	0.0496	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.343**		0.106	0.110	1.00	0.0585	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*95.9*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.202	U	0.819	0.820	5.00	1.45	pCi/g	10/04/21 14:52	10/05/21 08:30	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.624**		0.140	0.153		0.0927	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Bismuth-212	0.221	U	0.526	0.526		0.937	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Bismuth-214	**0.355**		0.106	0.112		0.103	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Lead-212	**0.313**		0.0816	0.0877		0.0972	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Lead-214	**0.392**		0.110	0.117		0.130	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Potassium-40	**4.34**		0.902	0.999		0.359	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Radium-226	**0.355**		0.106	0.112	1.00	0.103	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Thorium-232	**0.624**		0.140	0.153		0.0927	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Cesium-137	-0.00105	U	0.0511	0.0511		0.0949	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-152	-0.0209	U	0.109	0.109		0.191	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-154	0.0291	U	0.0484	0.0485		0.148	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Europium-155	-0.0964	U	0.335	0.335		0.571	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Sodium-22	-0.0468	U	0.0608	0.0610		0.103	pCi/g	08/31/21 16:48	09/29/21 12:47	1
Zinc-65	-0.0486	U	0.159	0.159		0.282	pCi/g	08/31/21 16:48	09/29/21 12:47	1

Client Sample ID: FSS-149-082521

Lab Sample ID: 160-43220-9
Matrix: Solid
Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.08		1.28	1.30	5.00	2.06	pCi/g	09/22/21 10:22	09/30/21 04:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.8*		*40 - 110*	*09/22/21 10:22*	*09/30/21 04:44*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.622	U	1.37	1.37	5.00	2.52	pCi/g	09/12/21 17:54	10/01/21 04:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*101*		*30 - 110*	*09/12/21 17:54*	*10/01/21 04:32*	*1*

Client Sample ID: FSS-149-082521

Lab Sample ID: 160-43220-9
Matrix: Solid
Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00
Percent Solids: 95.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.5		0.25	0.015	mg/Kg	☼	09/23/21 14:40	09/23/21 22:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	33		18	5.9	ug/Kg	☼	09/15/21 15:00	09/15/21 20:00	1

Client Sample ID: FSS-349-082521

Lab Sample ID: 160-43220-10
Matrix: Solid
Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0383	U	0.135	0.135	3.00	0.242	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.6*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:42*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.231	U	0.193	0.195	1.00	0.315	pCi/g	09/24/21 17:21	10/02/21 20:54	1

Client Sample ID: FSS-349-082521

Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-10

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00387	U	0.0161	0.0161	1.00	0.0434	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.000	U	0.0170	0.0170	1.00	0.0518	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*100*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.263**		0.0947	0.0971	1.00	0.0776	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	-0.0122	U	0.0107	0.0107	1.00	0.0695	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.304**		0.0960	0.0992	1.00	0.0379	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.2*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0113	U	0.791	0.791	5.00	1.38	pCi/g	10/04/21 14:52	10/05/21 08:52	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.422**		0.106	0.114		0.0629	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Bismuth-212	0.156	U	0.257	0.258		0.449	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Bismuth-214	**0.267**		0.0785	0.0831		0.0952	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Lead-212	**0.415**		0.0664	0.0848		0.0582	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Lead-214	**0.324**		0.0611	0.0694		0.0782	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Potassium-40	**4.51**		0.764	0.888		0.248	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Radium-226	**0.267**		0.0785	0.0831	1.00	0.0952	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Thorium-232	**0.422**		0.106	0.114		0.0629	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Cesium-137	0.0159	U	0.0411	0.0412		0.0724	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Europium-152	0.0207	U	0.0611	0.0612		0.131	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Europium-154	0.00685	U	0.0141	0.0141		0.0903	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Europium-155	-0.00338	U	0.202	0.202		0.347	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Sodium-22	0.00752	U	0.0234	0.0234		0.0445	pCi/g	08/31/21 16:48	09/29/21 11:38	1
Zinc-65	0.000	U	0.0420	0.0420		0.197	pCi/g	08/31/21 16:48	09/29/21 11:38	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**3.02**		1.74	1.77	5.00	2.80	pCi/g	09/22/21 10:22	09/30/21 05:18	1

Client Sample ID: FSS-349-082521

Lab Sample ID: 160-43220-10
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	70.3		40 - 110	09/22/21 10:22	09/30/21 05:18	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.30	U	1.33	1.34	5.00	2.55	pCi/g	09/12/21 17:54	10/01/21 05:05	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	100		30 - 110	09/12/21 17:54	10/01/21 05:05	1

Client Sample ID: FSS-349-082521

Lab Sample ID: 160-43220-10
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 95.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.6		0.31	0.019	mg/Kg	☼	09/23/21 14:40	09/23/21 22:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	31		19	6.1	ug/Kg	☼	09/15/21 15:00	09/15/21 20:07	1

Client Sample ID: FSS-150-082521

Lab Sample ID: 160-43220-11
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.171	U	0.149	0.149	3.00	0.298	pCi/g	09/20/21 16:47	10/07/21 20:42	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	82.3		40 - 110	09/20/21 16:47	10/07/21 20:42	1
Y Carrier	101		40 - 110	09/20/21 16:47	10/07/21 20:42	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.115	U	0.183	0.183	1.00	0.321	pCi/g	09/24/21 17:21	10/02/21 21:17	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0135	U	0.0274	0.0274	1.00	0.0547	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.0154	U	0.0213	0.0214	1.00	0.0231	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	93.3		30 - 110	09/11/21 14:30	09/22/21 11:30	1

Client Sample ID: FSS-150-082521

Date Collected: 08/25/21 09:15
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-11

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.278**		0.0937	0.0965	1.00	0.0587	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.0170	U	0.0274	0.0274	1.00	0.0471	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.226**		0.0841	0.0862	1.00	0.0521	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*89.1*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.102	U	0.870	0.870	5.00	1.54	pCi/g	10/04/21 14:52	10/05/21 09:15	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.219	U	0.0914	0.0940		0.265	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Bismuth-212	0.286	U	0.439	0.440		0.752	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Bismuth-214	**0.501**		0.111	0.122		0.0904	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Lead-212	**0.326**		0.0653	0.0773		0.0674	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Lead-214	**0.506**		0.0883	0.102		0.0830	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Potassium-40	**3.83**		0.783	0.872		0.554	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Radium-226	**0.501**		0.111	0.122	1.00	0.0904	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Thorium-232	0.219	U	0.0914	0.0940		0.265	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Cesium-137	0.0258	U	0.0484	0.0485		0.0837	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Europium-152	-0.0424	U	0.0812	0.0814		0.139	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Europium-154	0.0599	U	0.0875	0.0877		0.0854	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Europium-155	0.0683	U	0.137	0.137		0.234	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Sodium-22	0.0242	U	0.0296	0.0297		0.0490	pCi/g	08/31/21 16:48	09/29/21 12:46	1
Zinc-65	0.000	U	0.0342	0.0342		0.194	pCi/g	08/31/21 16:48	09/29/21 12:46	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.53	U	1.36	1.37	5.00	2.28	pCi/g	09/22/21 10:22	09/30/21 05:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*81.9*		*40 - 110*	*09/22/21 10:22*	*09/30/21 05:51*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.829	U	1.49	1.49	5.00	2.79	pCi/g	09/12/21 17:54	10/01/21 05:39	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.3*		*30 - 110*	*09/12/21 17:54*	*10/01/21 05:39*	*1*

Client Sample ID: FSS-150-082521

Lab Sample ID: 160-43220-11
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 95.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.5**		0.31	0.019	mg/Kg	☼	09/23/21 14:40	09/23/21 22:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**86**		20	6.6	ug/Kg	☼	09/15/21 15:00	09/15/21 20:10	1

Client Sample ID: FSS-350-082521

Lab Sample ID: 160-43220-12
Date Collected: 08/25/21 09:15
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.164	U	0.163	0.163	3.00	0.270	pCi/g	09/20/21 16:47	10/07/21 20:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.9*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:44*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:44*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.206	U	0.193	0.194	1.00	0.320	pCi/g	09/24/21 17:21	10/02/21 21:39	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0136	U	0.0191	0.0191	1.00	0.0420	pCi/g	09/11/21 14:30	09/23/21 20:03	1
Plutonium-239/240	-0.0195	U	0.0143	0.0144	1.00	0.0372	pCi/g	09/11/21 14:30	09/23/21 20:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/11/21 14:30*	*09/23/21 20:03*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.311**		0.0965	0.0998	1.00	0.0430	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.00955	U	0.0187	0.0187	1.00	0.0287	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.368**		0.104	0.108	1.00	0.0230	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.5*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.399	U	0.805	0.806	5.00	1.37	pCi/g	10/04/21 14:52	10/05/21 09:38	1

Client Sample ID: FSS-350-082521

Lab Sample ID: 160-43220-12

Date Collected: 08/25/21 09:15

Matrix: Solid

Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.438**		0.127	0.134		0.152	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Bismuth-212	0.181	U	0.527	0.528		0.941	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Bismuth-214	**0.399**		0.108	0.116		0.0894	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Lead-212	**0.376**		0.0818	0.0947		0.0938	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Lead-214	**0.338**		0.0897	0.0961		0.0826	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Potassium-40	**4.39**		0.909	1.01		0.673	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Radium-226	**0.399**		0.108	0.116	1.00	0.0894	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Thorium-232	**0.438**		0.127	0.134		0.152	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Cesium-137	0.0203	U	0.0369	0.0369		0.0645	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Europium-152	0.00595	U	0.0117	0.0117		0.141	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Europium-154	0.0727	U	0.108	0.108		0.107	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Europium-155	0.000	U	0.0594	0.0594		0.300	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Sodium-22	-0.0176	U	0.0413	0.0413		0.0745	pCi/g	08/31/21 16:48	09/29/21 11:36	1
Zinc-65	-0.0734	U	0.139	0.139		0.241	pCi/g	08/31/21 16:48	09/29/21 11:36	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.90	U	2.09	2.10	5.00	3.52	pCi/g	09/22/21 10:22	09/30/21 06:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*50.0*		*40 - 110*	*09/22/21 10:22*	*09/30/21 06:25*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.60	U	1.20	1.21	5.00	2.31	pCi/g	09/12/21 17:54	10/01/21 06:12	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/12/21 17:54*	*10/01/21 06:12*	*1*

Client Sample ID: FSS-350-082521

Lab Sample ID: 160-43220-12

Date Collected: 08/25/21 09:15

Matrix: Solid

Date Received: 08/26/21 09:00

Percent Solids: 92.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.8**		0.29	0.018	mg/Kg	☼	09/23/21 14:40	09/23/21 22:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**42**		20	6.4	ug/Kg	☼	09/15/21 15:00	09/15/21 20:13	1

Client Sample ID: FSS-151-082521

Date Collected: 08/25/21 09:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-13

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.365**		0.205	0.207	3.00	0.320	pCi/g	09/20/21 16:47	10/07/21 20:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.7*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:44*	*1*
Y Carrier	*100*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:44*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.161	U	0.185	0.185	1.00	0.313	pCi/g	09/24/21 17:21	10/02/21 22:02	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0286	U	0.0314	0.0315	1.00	0.100	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.00660	U	0.0326	0.0326	1.00	0.0750	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.0*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.309**		0.101	0.104	1.00	0.0474	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.0105	U	0.0206	0.0207	1.00	0.0316	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	**0.312**		0.101	0.104	1.00	0.0253	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.9*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.365	U	0.928	0.929	5.00	1.59	pCi/g	10/04/21 14:52	10/05/21 10:00	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.387**		0.113	0.120		0.0634	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Bismuth-212	0.131	U	0.767	0.767		1.35	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Bismuth-214	**0.367**		0.0776	0.0861		0.0294	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Lead-212	**0.413**		0.0665	0.0846		0.0586	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Lead-214	**0.387**		0.103	0.110		0.0868	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Potassium-40	**4.38**		0.756	0.875		0.250	pCi/g	08/31/21 16:48	09/29/21 13:21	1

Client Sample ID: FSS-151-082521
Lab Sample ID: 160-43220-13
Date Collected: 08/25/21 09:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.367**		0.0776	0.0861	1.00	0.0294	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Thorium-232	**0.387**		0.113	0.120		0.0634	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Cesium-137	**0.450**		0.0673	0.0815		0.0297	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-152	0.0467	U	0.0431	0.0434		0.151	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-154	0.0488	U	0.0833	0.0834		0.104	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-155	0.000	U	0.0754	0.0754		0.445	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Sodium-22	-0.00650	U	0.0382	0.0382		0.0713	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Zinc-65	0.000	U	0.0620	0.0620		0.140	pCi/g	08/31/21 16:48	09/29/21 13:21	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.83	U	1.29	1.31	5.00	2.11	pCi/g	09/22/21 10:22	09/30/21 06:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.4*		*40 - 110*	*09/22/21 10:22*	*09/30/21 06:58*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.943	U	1.41	1.41	5.00	2.62	pCi/g	09/12/21 17:54	10/01/21 06:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.0*		*30 - 110*	*09/12/21 17:54*	*10/01/21 06:46*	*1*

Client Sample ID: FSS-151-082521
Lab Sample ID: 160-43220-13
Date Collected: 08/25/21 09:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**9.7**		0.25	0.015	mg/Kg	☼	09/23/21 14:40	09/23/21 22:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**46**		20	6.4	ug/Kg	☼	09/15/21 15:00	09/15/21 20:15	1

Client Sample ID: FSS-152-082521
Lab Sample ID: 160-43220-14
Date Collected: 08/25/21 09:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0976	U	0.154	0.154	3.00	0.266	pCi/g	09/20/21 16:47	10/07/21 20:44	1

Client Sample ID: FSS-152-082521

Date Collected: 08/25/21 09:45
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-14

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	80.4		40 - 110	09/20/21 16:47	10/07/21 20:44	1
Y Carrier	100		40 - 110	09/20/21 16:47	10/07/21 20:44	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0992	U	0.176	0.176	1.00	0.309	pCi/g	09/24/21 17:21	10/02/21 22:25	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00397	U	0.0240	0.0240	1.00	0.0595	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.0377	U	0.0350	0.0352	1.00	0.0384	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	106		30 - 110	09/11/21 14:30	09/22/21 11:30	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.284**		0.0974	0.100	1.00	0.0666	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0454	U	0.0448	0.0450	1.00	0.0566	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.283**		0.0972	0.100	1.00	0.0664	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	84.7		30 - 110	09/12/21 17:52	09/22/21 15:46	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.384	U	0.615	0.616	5.00	1.12	pCi/g	10/04/21 14:52	10/05/21 10:23	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.385**		0.172	0.176		0.295	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Bismuth-212	-0.242	U	0.733	0.733		1.29	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Bismuth-214	**0.296**		0.0955	0.100		0.0884	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Lead-212	**0.412**		0.0887	0.103		0.104	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Lead-214	**0.290**		0.101	0.105		0.112	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Potassium-40	**3.64**		0.997	1.06		0.885	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Radium-226	**0.296**		0.0955	0.100	1.00	0.0884	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Thorium-232	**0.385**		0.172	0.176		0.295	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Cesium-137	**0.537**		0.0787	0.0958		0.0221	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Europium-152	0.138	U	0.0995	0.100		0.170	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Europium-154	0.0578	U	0.0930	0.0932		0.118	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Europium-155	0.000	U	0.0801	0.0801		0.342	pCi/g	08/31/21 16:48	09/30/21 09:40	1

Client Sample ID: FSS-152-082521

Lab Sample ID: 160-43220-14
Date Collected: 08/25/21 09:45
Matrix: Solid
Date Received: 08/26/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	0.0252	U	0.0202	0.0204		0.0310	pCi/g	08/31/21 16:48	09/30/21 09:40	1
Zinc-65	0.0187	U	0.145	0.145		0.261	pCi/g	08/31/21 16:48	09/30/21 09:40	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.79**		1.60	1.62	5.00	2.55	pCi/g	09/22/21 10:22	09/30/21 07:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*74.2*		*40 - 110*	*09/22/21 10:22*	*09/30/21 07:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.518	U	1.16	1.16	5.00	2.15	pCi/g	09/12/21 17:54	10/02/21 13:51	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*106*		*30 - 110*	*09/12/21 17:54*	*10/02/21 13:51*	*1*

Client Sample ID: FSS-152-082521

Lab Sample ID: 160-43220-14
Date Collected: 08/25/21 09:45
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 94.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.4**		0.28	0.017	mg/Kg	☼	09/23/21 14:40	09/23/21 22:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**37**		18	5.9	ug/Kg	☼	09/15/21 15:00	09/15/21 20:18	1

Client Sample ID: FSS-088-081921

Lab Sample ID: 160-43220-15
Date Collected: 08/25/21 14:00
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0643	U	0.154	0.154	3.00	0.271	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.1*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Client Sample ID: FSS-088-081921

Date Collected: 08/25/21 14:00
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-15

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.253	U	0.196	0.197	1.00	0.314	pCi/g	09/24/21 17:21	10/02/21 22:47	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0210	U	0.0311	0.0312	1.00	0.0544	pCi/g	09/11/21 14:30	09/22/21 11:31	1
Plutonium-239/240	0.00957	U	0.0222	0.0222	1.00	0.0474	pCi/g	09/11/21 14:30	09/22/21 11:31	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.6*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:31*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.383**		0.108	0.113	1.00	0.0643	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0352	U	0.0371	0.0372	1.00	0.0455	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.356**		0.103	0.107	1.00	0.0466	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.6*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0445	U	0.595	0.595	5.00	1.04	pCi/g	10/04/21 14:52	10/05/21 10:46	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.301	U	0.157	0.160		0.316	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Bismuth-212	0.000	U	0.619	0.619		1.36	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Bismuth-214	**0.371**		0.122	0.127		0.124	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Lead-212	**0.391**		0.0898	0.0983		0.0999	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Lead-214	**0.502**		0.131	0.140		0.134	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Potassium-40	**6.98**		1.18	1.37		0.384	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Radium-226	**0.371**		0.122	0.127	1.00	0.124	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Thorium-232	0.301	U	0.157	0.160		0.316	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Cesium-137	**0.149**		0.0455	0.0479		0.0267	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-152	0.0744	U	0.0829	0.0832		0.191	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-154	0.0334	U	0.0801	0.0801		0.140	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Europium-155	-0.0883	U	0.357	0.357		0.609	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Sodium-22	0.0344	U	0.0418	0.0419		0.0690	pCi/g	08/31/21 16:48	09/29/21 11:35	1
Zinc-65	0.0330	U	0.142	0.142		0.257	pCi/g	08/31/21 16:48	09/29/21 11:35	1

Client Sample ID: FSS-088-081921

Lab Sample ID: 160-43220-15
Matrix: Solid
Date Collected: 08/25/21 14:00
Date Received: 08/26/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.46	U	1.11	1.12	5.00	1.85	pCi/g	09/22/21 10:22	09/30/21 08:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*09/22/21 10:22*	*09/30/21 08:05*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.950	U	1.40	1.40	5.00	2.59	pCi/g	09/12/21 17:54	10/01/21 07:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.6*		*30 - 110*	*09/12/21 17:54*	*10/01/21 07:20*	*1*

Client Sample ID: FSS-088-081921

Lab Sample ID: 160-43220-15
Matrix: Solid
Date Collected: 08/25/21 14:00
Date Received: 08/26/21 09:00
Percent Solids: 93.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**42**		0.30	0.018	mg/Kg	☼	09/23/21 14:40	09/23/21 22:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**49**		19	6.0	ug/Kg	☼	09/15/21 15:00	09/15/21 20:20	1

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43220-16
Matrix: Solid
Date Collected: 08/25/21 14:00
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.285**		0.161	0.163	3.00	0.247	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.0*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.233	U	0.196	0.197	1.00	0.322	pCi/g	09/24/21 17:21	10/02/21 23:10	1

Client Sample ID: FSS-089-081921

Date Collected: 08/25/21 14:00
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-16

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00567	U	0.00981	0.00982	1.00	0.0181	pCi/g	09/11/21 14:30	09/23/21 20:03	1
Plutonium-239/240	0.00757	U	0.00909	0.00911	1.00	0.0145	pCi/g	09/11/21 14:30	09/23/21 20:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*92.5*		*30 - 110*	*09/11/21 14:30*	*09/23/21 20:03*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.188**		0.0746	0.0762	1.00	0.0368	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.00710	U	0.0191	0.0191	1.00	0.0458	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.150**		0.0687	0.0697	1.00	0.0540	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*86.1*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0959	U	0.909	0.909	5.00	1.59	pCi/g	10/04/21 14:52	10/05/21 11:08	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.352**		0.121	0.126		0.0784	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Bismuth-212	-0.299	U	0.734	0.735		1.28	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Bismuth-214	0.0765	U	0.0735	0.0739		0.203	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Lead-212	**0.371**		0.0742	0.0879		0.0738	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Lead-214	0.112	U	0.0634	0.0645		0.175	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Potassium-40	**3.04**		1.03	1.08		0.982	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Radium-226	0.0765	U	0.0735	0.0739	1.00	0.203	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Thorium-232	**0.352**		0.121	0.126		0.0784	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Cesium-137	-0.0323	U	0.0547	0.0548		0.0941	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Europium-152	0.0699	U	0.138	0.139		0.137	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Europium-154	0.0407	U	0.0715	0.0716		0.0924	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Europium-155	0.000	U	0.0679	0.0679		0.271	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Sodium-22	-0.0614	U	0.0665	0.0668		0.110	pCi/g	08/31/21 16:48	09/29/21 12:48	1
Zinc-65	0.000	U	0.0140	0.0140		0.221	pCi/g	08/31/21 16:48	09/29/21 12:48	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	**2.59**		1.52	1.55	5.00	2.45	pCi/g	09/22/21 10:22	09/30/21 08:39	1

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43220-16
Date Collected: 08/25/21 14:00
Matrix: Solid
Date Received: 08/26/21 09:00

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	78.1		40 - 110	09/22/21 10:22	09/30/21 08:39	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.642	U	1.41	1.41	5.00	2.58	pCi/g	09/12/21 17:54	10/01/21 07:53	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.5		30 - 110	09/12/21 17:54	10/01/21 07:53	1

Client Sample ID: FSS-089-081921

Lab Sample ID: 160-43220-16
Date Collected: 08/25/21 14:00
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 96.8

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.9		0.31	0.019	mg/Kg	☼	09/23/21 14:40	09/23/21 22:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.2	ug/Kg	☼	09/15/21 15:00	09/15/21 20:23	1

Client Sample ID: FSS-090-081921

Lab Sample ID: 160-43220-17
Date Collected: 08/19/21 14:00
Matrix: Solid
Date Received: 08/26/21 09:00

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0729	U	0.125	0.126	3.00	0.218	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	86.3		40 - 110	09/20/21 16:47	10/07/21 20:45	1
Y Carrier	98.7		40 - 110	09/20/21 16:47	10/07/21 20:45	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.260	U	0.199	0.200	1.00	0.320	pCi/g	09/24/21 17:21	10/02/21 23:33	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0121	U	0.0339	0.0339	1.00	0.0709	pCi/g	09/11/21 14:30	09/22/21 11:31	1
Plutonium-239/240	-0.00603	U	0.00683	0.00685	1.00	0.0498	pCi/g	09/11/21 14:30	09/22/21 11:31	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	83.9		30 - 110	09/11/21 14:30	09/22/21 11:31	1

Client Sample ID: FSS-090-081921

Date Collected: 08/19/21 14:00
Date Received: 08/26/21 09:00

Lab Sample ID: 160-43220-17

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.135	U	0.107	0.108	1.00	0.167	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0258	U	0.0530	0.0531	1.00	0.102	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.203**		0.0871	0.0887	1.00	0.0818	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.5*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.167	U	0.921	0.921	5.00	1.60	pCi/g	10/04/21 14:52	10/05/21 11:31	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.280**		0.118	0.121		0.0888	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Bismuth-212	-0.453	U	0.765	0.767		1.32	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Bismuth-214	**0.337**		0.119	0.124		0.113	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Lead-212	**0.350**		0.0824	0.0936		0.0934	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Lead-214	**0.377**		0.0975	0.105		0.111	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Potassium-40	**4.62**		0.989	1.09		0.752	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Radium-226	**0.337**		0.119	0.124	1.00	0.113	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Thorium-232	**0.280**		0.118	0.121		0.0888	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Cesium-137	-0.0419	U	0.0705	0.0706		0.121	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Europium-152	**0.207**		0.0910	0.0935		0.140	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Europium-154	0.0386	U	0.0909	0.0909		0.106	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Europium-155	0.0579	U	0.179	0.179		0.309	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Sodium-22	-0.00603	U	0.0434	0.0435		0.0832	pCi/g	08/31/21 16:48	09/29/21 11:03	1
Zinc-65	0.000	U	0.0547	0.0547		0.217	pCi/g	08/31/21 16:48	09/29/21 11:03	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.06	U	1.35	1.36	5.00	2.16	pCi/g	09/22/21 10:22	09/30/21 09:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.1*		*40 - 110*	*09/22/21 10:22*	*09/30/21 09:12*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.519	U	1.69	1.69	5.00	3.11	pCi/g	09/12/21 17:54	10/01/21 08:27	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*83.9*		*30 - 110*	*09/12/21 17:54*	*10/01/21 08:27*	*1*

Client Sample Results

Client: FPM Remediations Inc
Job ID: 160-43220-1
Project/Site: BNL Decommissioning Project

Client Sample ID: FSS-090-081921
Lab Sample ID: 160-43220-17

Date Collected: 08/19/21 14:00
Matrix: Solid
Date Received: 08/26/21 09:00
Percent Solids: 94.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.6		0.26	0.016	mg/Kg	☼	09/23/21 14:40	09/23/21 22:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/15/21 15:00	09/15/21 20:25	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549137/1-A
Matrix: Solid
Analysis Batch: 551072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549137

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0560	J	0.30	0.018	mg/Kg		09/23/21 14:40	09/23/21 21:23	1

Lab Sample ID: LCS 280-549137/2-A
Matrix: Solid
Analysis Batch: 551072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.4		mg/Kg		97	84 - 118

Lab Sample ID: 160-43220-1 MS
Matrix: Solid
Analysis Batch: 551072

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 549137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	3.8		18.0	20.5		mg/Kg	☼	93	84 - 118

Lab Sample ID: 160-43220-1 MSD
Matrix: Solid
Analysis Batch: 551072

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 549137

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	3.8		14.9	16.9		mg/Kg	☼	88	84 - 118	19	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-549895/1-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549895

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/15/21 15:00	09/16/21 12:05	1

Lab Sample ID: LCS 280-549895/2-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	352		ug/Kg		105	80 - 124

Lab Sample ID: LCSD 280-549895/3-A
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	356		ug/Kg		107	80 - 124	1	20

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43220-1 MS
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	15	U	399	427		ug/Kg	☼	107	80 - 124

Lab Sample ID: 160-43220-1 MSD
Matrix: Solid
Analysis Batch: 550080

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 549895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	15	U	359	355		ug/Kg	☼	99	80 - 124	19	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527652/1-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527652

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.01279	U	0.165	0.165	3.00	0.299	pCi/g	09/20/21 10:28	10/04/21 17:17	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.6*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*
Y Carrier	*98.7*		*40 - 110*	*09/20/21 10:28*	*10/04/21 17:17*	*1*

Lab Sample ID: LCS 160-527652/2-A
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527652

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Strontium-90			7.61	7.087		0.743	3.00	0.262	pCi/g	93	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*87.5*		*40 - 110*
Y Carrier	*100*		*40 - 110*

Lab Sample ID: 160-43195-A-30-H DU
Matrix: Solid
Analysis Batch: 530078

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527652

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.153	U		0.09027	U	0.205	3.00	0.358	pCi/g			0.44	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*75.1*		*40 - 110*
Y Carrier	*103*		*40 - 110*

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: MB 160-527804/1-A
Matrix: Solid
Analysis Batch: 530588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527804

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1069	U	0.195	0.195	3.00	0.338	pCi/g	09/20/21 16:47	10/08/21 10:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.7*		*40 - 110*	*09/20/21 16:47*	*10/08/21 10:09*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/08/21 10:09*	*1*

Lab Sample ID: LCS 160-527804/2-A
Matrix: Solid
Analysis Batch: 530525

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527804

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	6.549		0.792	3.00	0.406	pCi/g	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*52.3*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Lab Sample ID: 160-43220-5 DU
Matrix: Solid
Analysis Batch: 530479

Client Sample ID: FSS-146-082521
Prep Type: Total/NA
Prep Batch: 527804

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.223	U		0.2266	U	0.177	3.00	0.285	pCi/g			0.03	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*78.9*		*40 - 110*
Y Carrier	*99.4*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-528868/1-A
Matrix: Solid
Analysis Batch: 530124

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528868

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.2583	U	0.190	0.192	1.00	0.302	pCi/g	09/24/21 17:21	10/02/21 19:24	1

Lab Sample ID: LCS 160-528868/2-A
Matrix: Solid
Analysis Batch: 530124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528868

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.59	6.604		0.778	1.00	0.284	pCi/g	87	79 - 125		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43220-16 MS
Matrix: Solid
Analysis Batch: 530124

Client Sample ID: FSS-089-081921
Prep Type: Total/NA
Prep Batch: 528868

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	0.233	U	7.47	7.983		0.917	1.00	0.311	pCi/g	104	78 - 122

Lab Sample ID: 160-43220-17 DU
Matrix: Solid
Analysis Batch: 530124

Client Sample ID: FSS-090-081921
Prep Type: Total/NA
Prep Batch: 528868

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	0.260	U	0.2157	U	0.195	1.00	0.321	pCi/g	0.31	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526534/1-A
Matrix: Solid
Analysis Batch: 528459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526534

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01009	U	0.0343	0.0343	1.00	0.0735	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.007533	U	0.0203	0.0203	1.00	0.0486	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	0.01208	U	0.0230	0.0230	1.00	0.0451	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*96.9*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Lab Sample ID: LCS 160-526534/2-A
Matrix: Solid
Analysis Batch: 528461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526534

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.640		0.709	1.00	0.0387	pCi/g	104	76 - 117
Uranium-238	6.51	6.719		0.716	1.00	0.0494	pCi/g	103	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*82.7*		*30 - 110*

Lab Sample ID: 160-43220-7 DU
Matrix: Solid
Analysis Batch: 528465

Client Sample ID: FSS-148-082521
Prep Type: Total/NA
Prep Batch: 526534

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-233/234	0.212		0.2148		0.0840	1.00	0.0550	pCi/g	0.04	3
Uranium-235/236	0.0558	U	0.03130	U	0.0387	1.00	0.0596	pCi/g	0.77	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43220-7 DU
Matrix: Solid
Analysis Batch: 528465

Client Sample ID: FSS-148-082521
Prep Type: Total/NA
Prep Batch: 526534

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-238	0.313			0.1873		0.0775	1.00	0.0478	pCi/g			1.92	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*90.2*		*30 - 110*

Lab Sample ID: MB 160-526536/1-A
Matrix: Solid
Analysis Batch: 527992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526536

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.02787	U	0.0317	0.0318	1.00	0.0446	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-235/236	-0.002477	U	0.00485	0.00486	1.00	0.0479	pCi/g	09/12/21 17:59	09/20/21 11:34	1
Uranium-238	0.03973		0.0348	0.0350	1.00	0.0238	pCi/g	09/12/21 17:59	09/20/21 11:34	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*96.4*		*30 - 110*	*09/12/21 17:59*	*09/20/21 11:34*	*1*

Lab Sample ID: LCS 160-526536/2-A
Matrix: Solid
Analysis Batch: 527993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526536

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	7.112		0.749	1.00	0.0495	pCi/g	112	76 - 117		
Uranium-238			6.51	6.848		0.726	1.00	0.0239	pCi/g	105	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*99.6*		*30 - 110*

Lab Sample ID: 160-43195-A-20-H DU
Matrix: Solid
Analysis Batch: 527997

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526536

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.263			0.2613		0.0989	1.00	0.0761	pCi/g			0.02	3
Uranium-235/236	0.000	U		0.02861	U	0.0358	1.00	0.0503	pCi/g			1.55	3
Uranium-238	0.302			0.1794		0.0783	1.00	0.0467	pCi/g			1.87	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*92.5*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526439/1-A
Matrix: Solid
Analysis Batch: 528231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526439

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.02059	U	0.0122	0.0123	1.00	0.0681	pCi/g	09/11/21 12:57	09/19/21 23:44	1
Plutonium-239/240	0.01124	U	0.0214	0.0214	1.00	0.0420	pCi/g	09/11/21 12:57	09/19/21 23:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.7*		*30 - 110*	*09/11/21 12:57*	*09/19/21 23:44*	*1*

Lab Sample ID: LCS 160-526439/2-A
Matrix: Solid
Analysis Batch: 528232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526439

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.349		0.581	1.00	0.0672	pCi/g	103	80 - 125		
Plutonium-239/240			5.28	4.918		0.544	1.00	0.0432	pCi/g	93	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*108*		*30 - 110*

Lab Sample ID: 160-43195-A-20-F DU
Matrix: Solid
Analysis Batch: 528234

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526439

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.000	U		-0.001989	U	0.00390	1.00	0.0385	pCi/g			0.15	3
Plutonium-239/240	-0.00203	U		-0.003983	U	0.00553	1.00	0.0446	pCi/g			0.56	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Lab Sample ID: MB 160-526442/1-A
Matrix: Solid
Analysis Batch: 528351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526442

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.009800	U	0.0333	0.0333	1.00	0.0713	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.003924	U	0.0163	0.0163	1.00	0.0440	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.4*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-526442/2-A
Matrix: Solid
Analysis Batch: 528352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.19	4.891		0.551	1.00	0.0723	pCi/g	94	80 - 125
Plutonium-239/240	5.28	5.065		0.566	1.00	0.0465	pCi/g	96	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Lab Sample ID: 160-43220-7 DU
Matrix: Solid
Analysis Batch: 528561

Client Sample ID: FSS-148-082521
Prep Type: Total/NA
Prep Batch: 526442

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Plutonium-238	0.0313	U	0.001997	U	0.00678	1.00	0.0153	pCi/g	1.44	3
Plutonium-239/240	0.00588	U	0.005996	U	0.0104	1.00	0.0191	pCi/g	0.01	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*101*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-530072/1-A
Matrix: Solid
Analysis Batch: 530160

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530072

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.2297	U	0.957	0.958	5.00	1.71	pCi/g	10/04/21 14:52	10/05/21 03:58	1

Lab Sample ID: LCS 160-530072/2-A
Matrix: Solid
Analysis Batch: 530160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530072

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	84.4	81.98		9.27	5.00	1.72	pCi/g	97	75 - 125

Lab Sample ID: 160-43220-1 MS
Matrix: Solid
Analysis Batch: 530160

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 530072

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	-0.0501	U	64.9	66.52		7.48	5.00	1.28	pCi/g	103	29 - 128

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43220-1 DU
Matrix: Solid
Analysis Batch: 530160

Client Sample ID: FSS-136-082521
Prep Type: Total/NA
Prep Batch: 530072

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Carbon-14	-0.0501	U	0.4195	U	0.961	5.00	1.64	pCi/g	0.70	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-525011/1-A
Matrix: Solid
Analysis Batch: 529305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525011

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	-0.03204	U	0.149	0.149		0.184	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Bismuth-212	-0.2904	U	0.570	0.571		0.999	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Bismuth-214	-0.03458	U	0.113	0.113		0.207	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Lead-212	0.004431	U	0.0560	0.0560		0.101	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Lead-214	0.1365		0.0820	0.0832		0.119	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Potassium-40	0.1353	U	0.414	0.415		0.757	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Radium-226	-0.03458	U	0.113	0.113	1.00	0.207	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Thorium-232	-0.03204	U	0.149	0.149		0.184	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Cesium-137	0.002510	U	0.0422	0.0422		0.0792	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-152	0.08791	U	0.0478	0.0486		0.125	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-154	0.02761	U	0.0579	0.0580		0.0670	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-155	0.0000	U	0.0283	0.0283		0.300	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Sodium-22	0.03319	U	0.0246	0.0248		0.0349	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Zinc-65	0.0000	U	0.0404	0.0404		0.235	pCi/g	08/31/21 16:48	09/29/21 13:58	1

Lab Sample ID: LCS 160-525011/2-A
Matrix: Solid
Analysis Batch: 529302

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525011

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	103.6		11.9		1.21	pCi/g	108	87 - 116
Cesium-137	26.2	29.49		3.04		0.254	pCi/g	112	87 - 120
Cobalt-60	8.53	9.061		0.946		0.149	pCi/g	106	87 - 115

Lab Sample ID: 160-43230-A-8-D DU
Matrix: Solid
Analysis Batch: 529304

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525011

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium 228	0.691		0.5457		0.163		0.126	pCi/g	1.24	2
Bismuth-212	0.000000 0648	U	0.4939	U	1.12		1.92	pCi/g	0.74	2
Bismuth-214	0.417		0.3715		0.111		0.0993	pCi/g	0.53	2
Lead-212	0.517		0.4949		0.108		0.0914	pCi/g	0.28	2
Lead-214	0.391		0.3997		0.113		0.109	pCi/g	0.10	2
Potassium-40	4.30		3.630		0.920		0.678	pCi/g	0.98	2
Radium-226	0.417		0.3715		0.111	1.00	0.0993	pCi/g	0.53	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43230-A-8-D DU
Matrix: Solid
Analysis Batch: 529304

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525011

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Thorium-232	0.691			0.5457		0.163		0.126	pCi/g			1.24	2
Cesium-137	0.413			0.4271		0.0875		0.0465	pCi/g			0.24	2
Europium-152	0.0755	U		0.02677	U	0.0824		0.189	pCi/g			0.53	2
Europium-154	0.136			0.03847	U	0.112		0.129	pCi/g			1.51	2
Europium-155	-0.0738	U		0.1859		0.141		0.164	pCi/g			2.04	2
Sodium-22	0.0249	U		-0.02323	U	0.0418		0.0735	pCi/g			1.78	2
Zinc-65	0.000	U		0.0000	U	0.0640		0.193	pCi/g			0	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-528318/1-A
Matrix: Solid
Analysis Batch: 529551

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528318

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.562	U	1.34	1.35	5.00	2.21	pCi/g	09/22/21 10:22	09/29/21 22:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.6*		*40 - 110*	*09/22/21 10:22*	*09/29/21 22:35*	*1*

Lab Sample ID: LCS 160-528318/2-A
Matrix: Solid
Analysis Batch: 529551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528318

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	21.32		3.35	5.00	2.54	pCi/g	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*72.7*		*40 - 110*

Lab Sample ID: 160-43220-4 DU
Matrix: Solid
Analysis Batch: 529551

Client Sample ID: FSS-145-082521
Prep Type: Total/NA
Prep Batch: 528318

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	1.86	U		0.7685	U	0.923	5.00	1.53	pCi/g			1.17	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*110*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526535/1-A
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526535

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.191	U	1.50	1.50	5.00	2.82	pCi/g	09/12/21 17:54	10/01/21 01:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.4*		*30 - 110*	*09/12/21 17:54*	*10/01/21 01:44*	*1*

Lab Sample ID: LCS 160-526535/2-A
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526535

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	17.52		2.85	5.00	2.61	pCi/g	88	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Lab Sample ID: 160-43220-7 DU
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: FSS-148-082521
Prep Type: Total/NA
Prep Batch: 526535

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-1.51	U		-0.6282	U	1.44	5.00	2.68	pCi/g			0.89	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*101*		*30 - 110*

Lab Sample ID: MB 160-526537/1-A
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526537

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.5613	U	1.51	1.51	5.00	2.81	pCi/g	09/12/21 18:00	09/27/21 13:27	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*94.7*		*30 - 110*	*09/12/21 18:00*	*09/27/21 13:27*	*1*

Lab Sample ID: LCS 160-526537/2-A
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526537

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.9	17.22		3.06	5.00	2.90	pCi/g	87	75 - 125		

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: LCS 160-526537/2-A
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526537

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*108*		*30 - 110*

Lab Sample ID: 160-43195-A-20-J DU
Matrix: Solid
Analysis Batch: 529108

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526537

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-0.549	U		-0.5837	U	1.36	5.00	2.50	pCi/g			0.04	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Metals

Prep Batch: 549137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	3050B	
160-43220-2	FSS-137-082521	Total/NA	Solid	3050B	
160-43220-3	FSS-138-082521	Total/NA	Solid	3050B	
160-43220-4	FSS-145-082521	Total/NA	Solid	3050B	
160-43220-5	FSS-146-082521	Total/NA	Solid	3050B	
160-43220-6	FSS-147-082521	Total/NA	Solid	3050B	
160-43220-7	FSS-148-082521	Total/NA	Solid	3050B	
160-43220-8	FSS-348-082521	Total/NA	Solid	3050B	
160-43220-9	FSS-149-082521	Total/NA	Solid	3050B	
160-43220-10	FSS-349-082521	Total/NA	Solid	3050B	
160-43220-11	FSS-150-082521	Total/NA	Solid	3050B	
160-43220-12	FSS-350-082521	Total/NA	Solid	3050B	
160-43220-13	FSS-151-082521	Total/NA	Solid	3050B	
160-43220-14	FSS-152-082521	Total/NA	Solid	3050B	
160-43220-15	FSS-088-081921	Total/NA	Solid	3050B	
160-43220-16	FSS-089-081921	Total/NA	Solid	3050B	
160-43220-17	FSS-090-081921	Total/NA	Solid	3050B	
MB 280-549137/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549137/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43220-1 MS	FSS-136-082521	Total/NA	Solid	3050B	
160-43220-1 MSD	FSS-136-082521	Total/NA	Solid	3050B	

Prep Batch: 549895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	7471B	
160-43220-2	FSS-137-082521	Total/NA	Solid	7471B	
160-43220-3	FSS-138-082521	Total/NA	Solid	7471B	
160-43220-4	FSS-145-082521	Total/NA	Solid	7471B	
160-43220-5	FSS-146-082521	Total/NA	Solid	7471B	
160-43220-6	FSS-147-082521	Total/NA	Solid	7471B	
160-43220-7	FSS-148-082521	Total/NA	Solid	7471B	
160-43220-8	FSS-348-082521	Total/NA	Solid	7471B	
160-43220-9	FSS-149-082521	Total/NA	Solid	7471B	
160-43220-10	FSS-349-082521	Total/NA	Solid	7471B	
160-43220-11	FSS-150-082521	Total/NA	Solid	7471B	
160-43220-12	FSS-350-082521	Total/NA	Solid	7471B	
160-43220-13	FSS-151-082521	Total/NA	Solid	7471B	
160-43220-14	FSS-152-082521	Total/NA	Solid	7471B	
160-43220-15	FSS-088-081921	Total/NA	Solid	7471B	
160-43220-16	FSS-089-081921	Total/NA	Solid	7471B	
160-43220-17	FSS-090-081921	Total/NA	Solid	7471B	
MB 280-549895/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-549895/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-549895/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
160-43220-1 MS	FSS-136-082521	Total/NA	Solid	7471B	
160-43220-1 MSD	FSS-136-082521	Total/NA	Solid	7471B	

Analysis Batch: 550080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	7471B	549895
160-43220-2	FSS-137-082521	Total/NA	Solid	7471B	549895

Metals (Continued)

Analysis Batch: 550080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-3	FSS-138-082521	Total/NA	Solid	7471B	549895
160-43220-4	FSS-145-082521	Total/NA	Solid	7471B	549895
160-43220-5	FSS-146-082521	Total/NA	Solid	7471B	549895
160-43220-6	FSS-147-082521	Total/NA	Solid	7471B	549895
160-43220-7	FSS-148-082521	Total/NA	Solid	7471B	549895
160-43220-8	FSS-348-082521	Total/NA	Solid	7471B	549895
160-43220-9	FSS-149-082521	Total/NA	Solid	7471B	549895
160-43220-10	FSS-349-082521	Total/NA	Solid	7471B	549895
160-43220-11	FSS-150-082521	Total/NA	Solid	7471B	549895
160-43220-12	FSS-350-082521	Total/NA	Solid	7471B	549895
160-43220-13	FSS-151-082521	Total/NA	Solid	7471B	549895
160-43220-14	FSS-152-082521	Total/NA	Solid	7471B	549895
160-43220-15	FSS-088-081921	Total/NA	Solid	7471B	549895
160-43220-16	FSS-089-081921	Total/NA	Solid	7471B	549895
160-43220-17	FSS-090-081921	Total/NA	Solid	7471B	549895
MB 280-549895/1-A	Method Blank	Total/NA	Solid	7471B	549895
LCS 280-549895/2-A	Lab Control Sample	Total/NA	Solid	7471B	549895
LCSD 280-549895/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	549895
160-43220-1 MS	FSS-136-082521	Total/NA	Solid	7471B	549895
160-43220-1 MSD	FSS-136-082521	Total/NA	Solid	7471B	549895

Analysis Batch: 551072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	6020B	549137
160-43220-2	FSS-137-082521	Total/NA	Solid	6020B	549137
160-43220-3	FSS-138-082521	Total/NA	Solid	6020B	549137
160-43220-4	FSS-145-082521	Total/NA	Solid	6020B	549137
160-43220-5	FSS-146-082521	Total/NA	Solid	6020B	549137
160-43220-6	FSS-147-082521	Total/NA	Solid	6020B	549137
160-43220-7	FSS-148-082521	Total/NA	Solid	6020B	549137
160-43220-8	FSS-348-082521	Total/NA	Solid	6020B	549137
160-43220-9	FSS-149-082521	Total/NA	Solid	6020B	549137
160-43220-10	FSS-349-082521	Total/NA	Solid	6020B	549137
160-43220-11	FSS-150-082521	Total/NA	Solid	6020B	549137
160-43220-12	FSS-350-082521	Total/NA	Solid	6020B	549137
160-43220-13	FSS-151-082521	Total/NA	Solid	6020B	549137
160-43220-14	FSS-152-082521	Total/NA	Solid	6020B	549137
160-43220-15	FSS-088-081921	Total/NA	Solid	6020B	549137
160-43220-16	FSS-089-081921	Total/NA	Solid	6020B	549137
160-43220-17	FSS-090-081921	Total/NA	Solid	6020B	549137
MB 280-549137/1-A	Method Blank	Total/NA	Solid	6020B	549137
LCS 280-549137/2-A	Lab Control Sample	Total/NA	Solid	6020B	549137
160-43220-1 MS	FSS-136-082521	Total/NA	Solid	6020B	549137
160-43220-1 MSD	FSS-136-082521	Total/NA	Solid	6020B	549137

General Chemistry

Analysis Batch: 548701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	Moisture	
160-43220-2	FSS-137-082521	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 548701 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-3	FSS-138-082521	Total/NA	Solid	Moisture	
160-43220-4	FSS-145-082521	Total/NA	Solid	Moisture	
160-43220-5	FSS-146-082521	Total/NA	Solid	Moisture	
160-43220-6	FSS-147-082521	Total/NA	Solid	Moisture	
160-43220-7	FSS-148-082521	Total/NA	Solid	Moisture	
160-43220-8	FSS-348-082521	Total/NA	Solid	Moisture	
160-43220-9	FSS-149-082521	Total/NA	Solid	Moisture	
160-43220-10	FSS-349-082521	Total/NA	Solid	Moisture	
160-43220-11	FSS-150-082521	Total/NA	Solid	Moisture	
160-43220-12	FSS-350-082521	Total/NA	Solid	Moisture	
160-43220-13	FSS-151-082521	Total/NA	Solid	Moisture	
160-43220-14	FSS-152-082521	Total/NA	Solid	Moisture	
160-43220-15	FSS-088-081921	Total/NA	Solid	Moisture	
160-43220-16	FSS-089-081921	Total/NA	Solid	Moisture	
160-43220-17	FSS-090-081921	Total/NA	Solid	Moisture	
160-43220-14 DU	FSS-152-082521	Total/NA	Solid	Moisture	

Rad

Leach Batch: 524327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	Dry and Grind	
160-43220-2	FSS-137-082521	Total/NA	Solid	Dry and Grind	
160-43220-3	FSS-138-082521	Total/NA	Solid	Dry and Grind	
160-43220-4	FSS-145-082521	Total/NA	Solid	Dry and Grind	
160-43220-5	FSS-146-082521	Total/NA	Solid	Dry and Grind	
160-43220-6	FSS-147-082521	Total/NA	Solid	Dry and Grind	
160-43220-7	FSS-148-082521	Total/NA	Solid	Dry and Grind	
160-43220-8	FSS-348-082521	Total/NA	Solid	Dry and Grind	
160-43220-9	FSS-149-082521	Total/NA	Solid	Dry and Grind	
160-43220-10	FSS-349-082521	Total/NA	Solid	Dry and Grind	
160-43220-11	FSS-150-082521	Total/NA	Solid	Dry and Grind	
160-43220-12	FSS-350-082521	Total/NA	Solid	Dry and Grind	
160-43220-4 DU	FSS-145-082521	Total/NA	Solid	Dry and Grind	
160-43220-5 DU	FSS-146-082521	Total/NA	Solid	Dry and Grind	
160-43220-7 DU	FSS-148-082521	Total/NA	Solid	Dry and Grind	

Leach Batch: 524348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-13	FSS-151-082521	Total/NA	Solid	Dry and Grind	
160-43220-14	FSS-152-082521	Total/NA	Solid	Dry and Grind	
160-43220-15	FSS-088-081921	Total/NA	Solid	Dry and Grind	
160-43220-16	FSS-089-081921	Total/NA	Solid	Dry and Grind	
160-43220-17	FSS-090-081921	Total/NA	Solid	Dry and Grind	
160-43230-A-8-D DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43195-A-20-F DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43195-A-20-H DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43195-A-30-H DU	Duplicate	Total/NA	Solid	Dry and Grind	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Rad

Prep Batch: 525011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-2	FSS-137-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-3	FSS-138-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-4	FSS-145-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-5	FSS-146-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-6	FSS-147-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-7	FSS-148-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-8	FSS-348-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-9	FSS-149-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-10	FSS-349-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-11	FSS-150-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-12	FSS-350-082521	Total/NA	Solid	Fill_Geo-21	524327
160-43220-13	FSS-151-082521	Total/NA	Solid	Fill_Geo-21	524348
160-43220-14	FSS-152-082521	Total/NA	Solid	Fill_Geo-21	524348
160-43220-15	FSS-088-081921	Total/NA	Solid	Fill_Geo-21	524348
160-43220-16	FSS-089-081921	Total/NA	Solid	Fill_Geo-21	524348
160-43220-17	FSS-090-081921	Total/NA	Solid	Fill_Geo-21	524348
MB 160-525011/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525011/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43230-A-8-D DU	Duplicate	Total/NA	Solid	Fill_Geo-21	524348

Prep Batch: 526439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	ExtChrom	524327
160-43220-2	FSS-137-082521	Total/NA	Solid	ExtChrom	524327
160-43220-3	FSS-138-082521	Total/NA	Solid	ExtChrom	524327
160-43220-4	FSS-145-082521	Total/NA	Solid	ExtChrom	524327
160-43220-5	FSS-146-082521	Total/NA	Solid	ExtChrom	524327
160-43220-6	FSS-147-082521	Total/NA	Solid	ExtChrom	524327
MB 160-526439/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526439/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43195-A-20-F DU	Duplicate	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-7	FSS-148-082521	Total/NA	Solid	ExtChrom	524327
160-43220-8	FSS-348-082521	Total/NA	Solid	ExtChrom	524327
160-43220-9	FSS-149-082521	Total/NA	Solid	ExtChrom	524327
160-43220-10	FSS-349-082521	Total/NA	Solid	ExtChrom	524327
160-43220-11	FSS-150-082521	Total/NA	Solid	ExtChrom	524327
160-43220-12	FSS-350-082521	Total/NA	Solid	ExtChrom	524327
160-43220-13	FSS-151-082521	Total/NA	Solid	ExtChrom	524348
160-43220-14	FSS-152-082521	Total/NA	Solid	ExtChrom	524348
160-43220-15	FSS-088-081921	Total/NA	Solid	ExtChrom	524348
160-43220-16	FSS-089-081921	Total/NA	Solid	ExtChrom	524348
160-43220-17	FSS-090-081921	Total/NA	Solid	ExtChrom	524348
MB 160-526442/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526442/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43220-7 DU	FSS-148-082521	Total/NA	Solid	ExtChrom	524327

Rad

Prep Batch: 526534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-7	FSS-148-082521	Total/NA	Solid	ExtChrom	524327
160-43220-8	FSS-348-082521	Total/NA	Solid	ExtChrom	524327
160-43220-9	FSS-149-082521	Total/NA	Solid	ExtChrom	524327
160-43220-10	FSS-349-082521	Total/NA	Solid	ExtChrom	524327
160-43220-11	FSS-150-082521	Total/NA	Solid	ExtChrom	524327
160-43220-12	FSS-350-082521	Total/NA	Solid	ExtChrom	524327
160-43220-13	FSS-151-082521	Total/NA	Solid	ExtChrom	524348
160-43220-14	FSS-152-082521	Total/NA	Solid	ExtChrom	524348
160-43220-15	FSS-088-081921	Total/NA	Solid	ExtChrom	524348
160-43220-16	FSS-089-081921	Total/NA	Solid	ExtChrom	524348
160-43220-17	FSS-090-081921	Total/NA	Solid	ExtChrom	524348
MB 160-526534/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526534/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43220-7 DU	FSS-148-082521	Total/NA	Solid	ExtChrom	524327

Prep Batch: 526535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-7	FSS-148-082521	Total/NA	Solid	Leach_Precip	
160-43220-8	FSS-348-082521	Total/NA	Solid	Leach_Precip	
160-43220-9	FSS-149-082521	Total/NA	Solid	Leach_Precip	
160-43220-10	FSS-349-082521	Total/NA	Solid	Leach_Precip	
160-43220-11	FSS-150-082521	Total/NA	Solid	Leach_Precip	
160-43220-12	FSS-350-082521	Total/NA	Solid	Leach_Precip	
160-43220-13	FSS-151-082521	Total/NA	Solid	Leach_Precip	
160-43220-14	FSS-152-082521	Total/NA	Solid	Leach_Precip	
160-43220-15	FSS-088-081921	Total/NA	Solid	Leach_Precip	
160-43220-16	FSS-089-081921	Total/NA	Solid	Leach_Precip	
160-43220-17	FSS-090-081921	Total/NA	Solid	Leach_Precip	
MB 160-526535/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526535/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43220-7 DU	FSS-148-082521	Total/NA	Solid	Leach_Precip	

Prep Batch: 526536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	ExtChrom	524327
160-43220-2	FSS-137-082521	Total/NA	Solid	ExtChrom	524327
160-43220-3	FSS-138-082521	Total/NA	Solid	ExtChrom	524327
160-43220-4	FSS-145-082521	Total/NA	Solid	ExtChrom	524327
160-43220-5	FSS-146-082521	Total/NA	Solid	ExtChrom	524327
160-43220-6	FSS-147-082521	Total/NA	Solid	ExtChrom	524327
MB 160-526536/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526536/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43195-A-20-H DU	Duplicate	Total/NA	Solid	ExtChrom	524351

Prep Batch: 526537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	Leach_Precip	
160-43220-2	FSS-137-082521	Total/NA	Solid	Leach_Precip	
160-43220-3	FSS-138-082521	Total/NA	Solid	Leach_Precip	
160-43220-4	FSS-145-082521	Total/NA	Solid	Leach_Precip	
160-43220-5	FSS-146-082521	Total/NA	Solid	Leach_Precip	

Rad (Continued)

Prep Batch: 526537 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-6	FSS-147-082521	Total/NA	Solid	Leach_Precip	
MB 160-526537/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526537/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43195-A-20-J DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 527652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	DPS-7	524327
160-43220-2	FSS-137-082521	Total/NA	Solid	DPS-7	524327
160-43220-3	FSS-138-082521	Total/NA	Solid	DPS-7	524327
160-43220-4	FSS-145-082521	Total/NA	Solid	DPS-7	524327
MB 160-527652/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527652/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43195-A-30-H DU	Duplicate	Total/NA	Solid	DPS-7	524351

Prep Batch: 527804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-5	FSS-146-082521	Total/NA	Solid	DPS-7	524327
160-43220-6	FSS-147-082521	Total/NA	Solid	DPS-7	524327
160-43220-7	FSS-148-082521	Total/NA	Solid	DPS-7	524327
160-43220-8	FSS-348-082521	Total/NA	Solid	DPS-7	524327
160-43220-9	FSS-149-082521	Total/NA	Solid	DPS-7	524327
160-43220-10	FSS-349-082521	Total/NA	Solid	DPS-7	524327
160-43220-11	FSS-150-082521	Total/NA	Solid	DPS-7	524327
160-43220-12	FSS-350-082521	Total/NA	Solid	DPS-7	524327
160-43220-13	FSS-151-082521	Total/NA	Solid	DPS-7	524348
160-43220-14	FSS-152-082521	Total/NA	Solid	DPS-7	524348
160-43220-15	FSS-088-081921	Total/NA	Solid	DPS-7	524348
160-43220-16	FSS-089-081921	Total/NA	Solid	DPS-7	524348
160-43220-17	FSS-090-081921	Total/NA	Solid	DPS-7	524348
MB 160-527804/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527804/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43220-5 DU	FSS-146-082521	Total/NA	Solid	DPS-7	524327

Prep Batch: 528318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-2	FSS-137-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-3	FSS-138-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-4	FSS-145-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-5	FSS-146-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-6	FSS-147-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-7	FSS-148-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-8	FSS-348-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-9	FSS-149-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-10	FSS-349-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-11	FSS-150-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-12	FSS-350-082521	Total/NA	Solid	Ext_Chrom_LSC	524327
160-43220-13	FSS-151-082521	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43220-14	FSS-152-082521	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43220-15	FSS-088-081921	Total/NA	Solid	Ext_Chrom_LSC	524348

Rad (Continued)

Prep Batch: 528318 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-16	FSS-089-081921	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43220-17	FSS-090-081921	Total/NA	Solid	Ext_Chrom_LSC	524348
MB 160-528318/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-528318/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43220-4 DU	FSS-145-082521	Total/NA	Solid	Ext_Chrom_LSC	524327

Prep Batch: 528868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-2	FSS-137-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-3	FSS-138-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-4	FSS-145-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-5	FSS-146-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-6	FSS-147-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-7	FSS-148-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-8	FSS-348-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-9	FSS-149-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-10	FSS-349-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-11	FSS-150-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-12	FSS-350-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-13	FSS-151-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-14	FSS-152-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-15	FSS-088-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43220-16	FSS-089-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43220-17	FSS-090-081921	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528868/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528868/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43220-16 MS	FSS-089-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43220-17 DU	FSS-090-081921	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 530072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1	FSS-136-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-2	FSS-137-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-3	FSS-138-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-4	FSS-145-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-5	FSS-146-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-6	FSS-147-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-7	FSS-148-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-8	FSS-348-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-9	FSS-149-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-10	FSS-349-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-11	FSS-150-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-12	FSS-350-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-13	FSS-151-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-14	FSS-152-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-15	FSS-088-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43220-16	FSS-089-081921	Total/NA	Solid	LSC_Dist_Susp	
160-43220-17	FSS-090-081921	Total/NA	Solid	LSC_Dist_Susp	
MB 160-530072/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-530072/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 530072 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-1 MS	FSS-136-082521	Total/NA	Solid	LSC_Dist_Susp	
160-43220-1 DU	FSS-136-082521	Total/NA	Solid	LSC_Dist_Susp	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43220-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43195-A-30-H DU	Duplicate	75.1	103
160-43220-1	FSS-136-082521	80.9	98.3
160-43220-2	FSS-137-082521	79.8	94.2
160-43220-3	FSS-138-082521	82.6	94.6
160-43220-4	FSS-145-082521	77.8	95.3
160-43220-5	FSS-146-082521	78.0	98.7
160-43220-5 DU	FSS-146-082521	78.9	99.4
160-43220-6	FSS-147-082521	83.6	97.9
160-43220-7	FSS-148-082521	79.3	101
160-43220-8	FSS-348-082521	82.0	102
160-43220-9	FSS-149-082521	84.7	101
160-43220-10	FSS-349-082521	83.6	102
160-43220-11	FSS-150-082521	82.3	101
160-43220-12	FSS-350-082521	80.9	102
160-43220-13	FSS-151-082521	79.7	100
160-43220-14	FSS-152-082521	80.4	100
160-43220-15	FSS-088-081921	82.1	101
160-43220-16	FSS-089-081921	83.0	101
160-43220-17	FSS-090-081921	86.3	98.7
LCS 160-527652/2-A	Lab Control Sample	87.5	100
LCS 160-527804/2-A	Lab Control Sample	52.3	101
MB 160-527652/1-A	Method Blank	84.6	98.7
MB 160-527804/1-A	Method Blank	75.7	101

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43195-A-20-F DU	Duplicate	100
160-43220-1	FSS-136-082521	78.8
160-43220-2	FSS-137-082521	82.4
160-43220-3	FSS-138-082521	82.1
160-43220-4	FSS-145-082521	85.0
160-43220-5	FSS-146-082521	90.3
160-43220-6	FSS-147-082521	87.9
160-43220-7	FSS-148-082521	103
160-43220-7 DU	FSS-148-082521	101
160-43220-8	FSS-348-082521	102
160-43220-9	FSS-149-082521	101
160-43220-10	FSS-349-082521	100
160-43220-11	FSS-150-082521	93.3
160-43220-12	FSS-350-082521	103
160-43220-13	FSS-151-082521	94.0
160-43220-14	FSS-152-082521	106

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43220-15	FSS-088-081921	94.6						
160-43220-16	FSS-089-081921	92.5						
160-43220-17	FSS-090-081921	83.9						
LCS 160-526439/2-A	Lab Control Sample	108						
LCS 160-526442/2-A	Lab Control Sample	100						
MB 160-526439/1-A	Method Blank	94.7						
MB 160-526442/1-A	Method Blank	90.4						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43195-A-20-H DU	Duplicate	92.5						
160-43220-1	FSS-136-082521	78.2						
160-43220-2	FSS-137-082521	82.4						
160-43220-3	FSS-138-082521	80.7						
160-43220-4	FSS-145-082521	99.2						
160-43220-5	FSS-146-082521	99.7						
160-43220-6	FSS-147-082521	73.8						
160-43220-7	FSS-148-082521	85.0						
160-43220-7 DU	FSS-148-082521	90.2						
160-43220-8	FSS-348-082521	106						
160-43220-9	FSS-149-082521	95.9						
160-43220-10	FSS-349-082521	85.2						
160-43220-11	FSS-150-082521	89.1						
160-43220-12	FSS-350-082521	88.5						
160-43220-13	FSS-151-082521	82.9						
160-43220-14	FSS-152-082521	84.7						
160-43220-15	FSS-088-081921	88.6						
160-43220-16	FSS-089-081921	86.1						
160-43220-17	FSS-090-081921	77.5						
LCS 160-526534/2-A	Lab Control Sample	82.7						
LCS 160-526536/2-A	Lab Control Sample	99.6						
MB 160-526534/1-A	Method Blank	96.9						
MB 160-526536/1-A	Method Blank	96.4						

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43220-1	FSS-136-082521	77.5						
160-43220-2	FSS-137-082521	66.0						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43220-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43220-3	FSS-138-082521	72.5						
160-43220-4	FSS-145-082521	72.4						
160-43220-4 DU	FSS-145-082521	110						
160-43220-5	FSS-146-082521	109						
160-43220-6	FSS-147-082521	85.1						
160-43220-7	FSS-148-082521	75.7						
160-43220-8	FSS-348-082521	89.9						
160-43220-9	FSS-149-082521	87.8						
160-43220-10	FSS-349-082521	70.3						
160-43220-11	FSS-150-082521	81.9						
160-43220-12	FSS-350-082521	50.0						
160-43220-13	FSS-151-082521	85.4						
160-43220-14	FSS-152-082521	74.2						
160-43220-15	FSS-088-081921	104						
160-43220-16	FSS-089-081921	78.1						
160-43220-17	FSS-090-081921	80.1						
LCS 160-528318/2-A	Lab Control Sample	72.7						
MB 160-528318/1-A	Method Blank	80.6						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43195-A-20-J DU	Duplicate	100						
160-43220-1	FSS-136-082521	78.8						
160-43220-2	FSS-137-082521	82.4						
160-43220-3	FSS-138-082521	82.1						
160-43220-4	FSS-145-082521	85.0						
160-43220-5	FSS-146-082521	90.3						
160-43220-6	FSS-147-082521	87.9						
160-43220-7	FSS-148-082521	103						
160-43220-7 DU	FSS-148-082521	101						
160-43220-8	FSS-348-082521	102						
160-43220-9	FSS-149-082521	101						
160-43220-10	FSS-349-082521	100						
160-43220-11	FSS-150-082521	93.3						
160-43220-12	FSS-350-082521	103						
160-43220-13	FSS-151-082521	94.0						
160-43220-14	FSS-152-082521	106						
160-43220-15	FSS-088-081921	94.6						
160-43220-16	FSS-089-081921	92.5						
160-43220-17	FSS-090-081921	83.9						
LCS 160-526535/2-A	Lab Control Sample	100						
LCS 160-526537/2-A	Lab Control Sample	108						
MB 160-526535/1-A	Method Blank	90.4						
MB 160-526537/1-A	Method Blank	94.7						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43220-1
Project/Site: BNL Decommissioning Project

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	10/11/2021
Sample Receipt Date	08/27/2021
RJ Lee Group Job No.	AOH1063281-0
Authorization/P.O. No.	
Client Job No./Name	160-43220-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546795.HPL	FSS-136-082521 (160-43220-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546796.HPL	FSS-137-082521 (160-43220-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546797.HPL	FSS-138-082521 (160-43220-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43220-1 RJ Lee Group Job No: AOH1063281-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546798.HPL	FSS-145-082521 (160-43220-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546799.HPL	FSS-146-082521 (160-43220-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546800.HPL	FSS-147-082521 (160-43220-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546801.HPL	FSS-148-082521 (160-43220-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546802.HPL	FSS-348-082521 (160-43220-8)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43220-1 RJ Lee Group Job No: AOH1063281-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546803.HPL	FSS-149-082521 (160-43220-9)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546804.HPL	FSS-349-082521 (160-43220-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546805.HPL	FSS-150-082521 (160-43220-11)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546806.HPL	FSS-350-082521 (160-43220-12)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546807.HPL	FSS-151-082521 (160-43220-13)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43220-1 RJ Lee Group Job No: AOH1063281-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546808.HPL	FSS-152-082521 (160-43220-14)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546809.HPL	FSS-088-082521 (160-43220-15)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546810.HPL	FSS-089-082521 (160-43220-16)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546811.HPL	FSS-090-082521 (160-43220-17)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/09/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43220-1 RJ Lee Group Job No: AOH1063281-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.9
Samples FSS-153 through -070

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43230-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/12/2021 11:41:46 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-43230-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43230-1

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

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

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

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

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

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

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

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

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

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

RECEIPT

The samples were received on 8/27/2021 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.3º C, 10.5º C, 25.6º C and 25.6º C.

ASBESTOS

Job ID: 160-43230-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/27/2021 and analyzed on 09/28/2021.

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

MERCURY (CVAA)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/21/2021 and analyzed on 09/22/2021.

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

PERCENT SOLIDS

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 09/02/2021.

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

STRONTIUM-90 (GFPC)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 08/27/2021, prepared on 09/20/2021 and 09/21/2021 and analyzed on 10/07/2021 and 10/08/2021.

Preparation Batch 160-527864:
The detection goal was not met for the sample. There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch met the detection goal indicating the presence of matrix interference. Analytical results were reported with the detection limit achieved: FSS-161-082621 (160-43230-9).

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

TRITIUM

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Tritium in

Job ID: 160-43230-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

accordance with EPA Method 906.0. The samples were prepared on 09/26/2021 and analyzed on 09/28/2021.

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

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 08/27/2021, prepared on 09/11/2021 and analyzed on 09/22/2021 and 09/23/2021.

Preparation Batch 160-526443:
The following sample had tracer recovery below the QC limit of 30% indicating a potential increase in the stated uncertainty. Plutonium-238 and Plutonium-239/240 were not detected in the samples, and the sample count achieved 400 tracer counts; therefore, the results were reported: FSS-168-082621 (160-43230-16).

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

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 08/27/2021, prepared on 09/12/2021 and analyzed on 09/22/2021, 09/23/2021 and 09/24/2021.

Preparation Batch 160-526530:
The following sample had tracer recovery below the QC limit of 30% indicating a potential increase in the stated uncertainty. Uranium-234, Uranium-235, and Uranium-238 were not detected above the RL in the samples; therefore, the results were reported: FSS-168-082621 (160-43230-16).

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

CARBON-14 BY LSC

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 09/27/2021 and 09/28/2021 and analyzed on 09/29/2021.

Preparation Batch 160-529126:
The samples did not meet the requested limit. While the MDC is slightly above the requested limit, all batch QC was within parameters and instrument performance was demonstrated by acceptable daily checks. Analytical results were reported with the detection limit achieved: (160-43414-A-2-B).

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

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621

Job ID: 160-43230-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

(160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 08/27/2021, prepared on 08/31/2021 and 09/02/2021 and analyzed on 09/24/2021, 09/29/2021 and 09/30/2021.

Preparation Batches 160-524364 and 160-525251:
The replicate precision for Eu-152 did not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (160-43230-A-18-D DU).

Preparation Batch 160-525244:
For samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), (LCS 160-525244/2-A), (MB 160-525244/1-A), and (160-43230-A-7-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-525251:
For samples FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-170-082621 (160-43230-18), and (160-43230-A-18-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234

Job ID: 160-43230-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-525011:
For samples FSS-160-082621 (160-43230-8), FSS-165-082621 (160-43230-13), FSS-169-082621 (160-43230-17), and (160-43230-A-8-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

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

Job ID: 160-43230-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

NICKEL 59/63

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 08/27/2021, prepared on 09/22/2021 and 09/29/2021 and analyzed on 09/30/2021, 10/01/2021 and 10/05/2021.

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

PLUTONIUM 241

Samples FSS-153-082621 (160-43230-1), FSS-154-082621 (160-43230-2), FSS-155-082621 (160-43230-3), FSS-156-082621 (160-43230-4), FSS-157-082621 (160-43230-5), FSS-158-082621 (160-43230-6), FSS-159-082621 (160-43230-7), FSS-160-082621 (160-43230-8), FSS-161-082621 (160-43230-9), FSS-162-082621 (160-43230-10), FSS-163-082621 (160-43230-11), FSS-164-082621 (160-43230-12), FSS-165-082621 (160-43230-13), FSS-166-082621 (160-43230-14), FSS-167-082621 (160-43230-15), FSS-168-082621 (160-43230-16), FSS-169-082621 (160-43230-17) and FSS-170-082621 (160-43230-18) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/12/2021 and analyzed on 09/30/2021 and 10/01/2021.

Preparation Batch 160-526531:
The sample had carrier recovery that failed below the lower QC limit at 1.5% (30%). Matrix interferences were noted during initial preparation: FSS-168-082621 (160-43230-16).

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

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-26-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-153-082621	26-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS005 0"-6"
FSS-154-082621	26-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS005 6"-12"
FSS-155-082621	26-Aug	10:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - SS005 18"-24"
FSS-156-082621	26-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - Bias 1 0"-6"
FSS-157-082621	26-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - BIAS 1 6"-12"
FSS-158-082621	26-Aug	11:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - Bias 1 18"-24"
FSS-159-082621	26-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias 1 0"-6"
FSS-160-082621	26-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - BIAS 1 6"-12"
FSS-161-082621	26-Aug	13:15	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7D - Bias 1 18"-24"
FSS-162-082621	26-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - Bias 2 0"-6"
FSS-163-082621	26-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - BIAS 2 6"-12"
FSS-164-082621	26-Aug	13:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7B - Bias 2 18"-24"
FSS-165-082621	26-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - Bias 1 0"-6"
FSS-166-082621	26-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - BIAS 1 6"-12"
FSS-167-082621	26-Aug	14:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - Bias 1 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____	Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-26-21/17:00	Received by:Fed Ex	Company: / Date/Time:
Relinquished by: FE	Company:	Date/Time:	Received by:	Company: ETA SR / Date/Time: 8/27/21 10:15
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: / Date/Time:

160-43230 Chain of Custody

Eurofins TestAmerica, St. Louis
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Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 08-26-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	2 of 2 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: B. Gaudette
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-168-082621	26-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - Bias 2 0"-6"
FSS-169-082621	26-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - BIAS 2 6"-12"
FSS-170-082621	26-Aug	14:45	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU 7C - Bias 2 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____	Corr'd: _____	Therm ID No.: _____
Relinquished by: Douglas Beard DB	Company: Cabrera Services,Inc.	Date/Time:8-26-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FE	Company:	Date/Time:	Received by: Micha Kowalinski	Company: EMSL	Date/Time: 8/27/21 10:15
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218293.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43230-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/10/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-153-082621 (160-43230-1)	8/26/21	10:30 Eastern		Solid			X	X	X	1	
FSS-154-082621 (160-43230-2)	8/26/21	10:30 Eastern		Solid			X	X	X	1	
FSS-155-082621 (160-43230-3)	8/26/21	10:30 Eastern		Solid			X	X	X	1	
FSS-156-082621 (160-43230-4)	8/26/21	11:30 Eastern		Solid			X	X	X	1	
FSS-157-082621 (160-43230-5)	8/26/21	11:30 Eastern		Solid			X	X	X	1	
FSS-158-082621 (160-43230-6)	8/26/21	11:30 Eastern		Solid			X	X	X	1	
FSS-159-082621 (160-43230-7)	8/26/21	13:15 Eastern		Solid			X	X	X	1	
FSS-160-082621 (160-43230-8)	8/26/21	13:15 Eastern		Solid			X	X	X	1	
FSS-161-082621 (160-43230-9)	8/26/21	13:15 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Michael Koninings	8/27/2021 19:00	EMA SL		08/28/2021 0930	EDEN
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.6 IR11 +1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218293.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43230-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/10/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	7471B_DOD5/7471B_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FSS-162-082621 (160-43230-10)	8/26/21	13:45 Eastern		Solid			X	X	X	1	
FSS-163-082621 (160-43230-11)	8/26/21	13:45 Eastern		Solid			X	X	X	1	
FSS-164-082621 (160-43230-12)	8/26/21	13:45 Eastern		Solid			X	X	X	1	
FSS-165-082621 (160-43230-13)	8/26/21	14:30 Eastern		Solid			X	X	X	1	
FSS-166-082621 (160-43230-14)	8/26/21	14:30 Eastern		Solid			X	X	X	1	
FSS-167-082621 (160-43230-15)	8/26/21	14:30 Eastern		Solid			X	X	X	1	
FSS-168-082621 (160-43230-16)	8/26/21	14:45 Eastern		Solid			X	X	X	1	
FSS-169-082621 (160-43230-17)	8/26/21	14:45 Eastern		Solid			X	X	X	1	
FSS-170-082621 (160-43230-18)	8/26/21	14:45 Eastern		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Maria Konicki-Kings	Date/Time: 8/27/2021 19:00	Company ETA SDL	Received by:	Date/Time: 08/28/2021 0930	Company ETA PEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

AOH1063332-D

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218291.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43230-1
Address: 350 Hochberg Rd, ,	Due Date Requested: 10/11/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03) Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-153-082621 (160-43230-1)	8/26/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-154-082621 (160-43230-2)	8/26/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-155-082621 (160-43230-3)	8/26/21	10:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-156-082621 (160-43230-4)	8/26/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-157-082621 (160-43230-5)	8/26/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-158-082621 (160-43230-6)	8/26/21	11:30 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-159-082621 (160-43230-7)	8/26/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-160-082621 (160-43230-8)	8/26/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-161-082621 (160-43230-9)	8/26/21	13:15 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

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Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Michael Cunningham	Date/Time: 8/27/2021 19:00	Company ETA Sh	Received by: M Carse	Date/Time: 08-30-21 08:26 to:07 me	Company RJ Lee Group	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

A OH1063332-0

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218291.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43230-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/11/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos - PLM-EPA600-R-93/LAP-080.03)/ Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-162-082621 (160-43230-10)	8/26/21	13:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-163-082621 (160-43230-11)	8/26/21	13:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-164-082621 (160-43230-12)	8/26/21	13:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-165-082621 (160-43230-13)	8/26/21	14:30 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-166-082621 (160-43230-14)	8/26/21	14:30 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-167-082621 (160-43230-15)	8/26/21	14:30 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-168-082621 (160-43230-16)	8/26/21	14:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-169-082621 (160-43230-17)	8/26/21	14:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-170-082621 (160-43230-18)	8/26/21	14:45 Eastern		Solid			X		Asbestos - PLM-EPA600-R-93/LAP-080.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sylvia Koninsinger	8/27/2021 19:00	ETA SL	M. Carao	08-30-21 08:26	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43230-1

Login Number: 43230
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

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

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43230-1

Login Number: 43230
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 08/28/21 11:08 AM

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

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
Q	Tracer is outside acceptance limits.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43230-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43230-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43230-1	FSS-153-082621	Solid	08/26/21 10:30	08/27/21 10:15
160-43230-2	FSS-154-082621	Solid	08/26/21 10:30	08/27/21 10:15
160-43230-3	FSS-155-082621	Solid	08/26/21 10:30	08/27/21 10:15
160-43230-4	FSS-156-082621	Solid	08/26/21 11:30	08/27/21 10:15
160-43230-5	FSS-157-082621	Solid	08/26/21 11:30	08/27/21 10:15
160-43230-6	FSS-158-082621	Solid	08/26/21 11:30	08/27/21 10:15
160-43230-7	FSS-159-082621	Solid	08/26/21 13:15	08/27/21 10:15
160-43230-8	FSS-160-082621	Solid	08/26/21 13:15	08/27/21 10:15
160-43230-9	FSS-161-082621	Solid	08/26/21 13:15	08/27/21 10:15
160-43230-10	FSS-162-082621	Solid	08/26/21 13:45	08/27/21 10:15
160-43230-11	FSS-163-082621	Solid	08/26/21 13:45	08/27/21 10:15
160-43230-12	FSS-164-082621	Solid	08/26/21 13:45	08/27/21 10:15
160-43230-13	FSS-165-082621	Solid	08/26/21 14:30	08/27/21 10:15
160-43230-14	FSS-166-082621	Solid	08/26/21 14:30	08/27/21 10:15
160-43230-15	FSS-167-082621	Solid	08/26/21 14:30	08/27/21 10:15
160-43230-16	FSS-168-082621	Solid	08/26/21 14:45	08/27/21 10:15
160-43230-17	FSS-169-082621	Solid	08/26/21 14:45	08/27/21 10:15
160-43230-18	FSS-170-082621	Solid	08/26/21 14:45	08/27/21 10:15

Client Sample ID: FSS-153-082621

Date Collected: 08/26/21 10:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-1

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0463	U	0.151	0.151	3.00	0.284	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.2*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0329	U	0.227	0.227	1.00	0.427	pCi/g	09/26/21 17:58	09/28/21 15:03	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0102	U	0.0297	0.0297	1.00	0.0643	pCi/g	09/11/21 14:30	09/22/21 11:31	1
Plutonium-239/240	0.00613	U	0.0165	0.0165	1.00	0.0396	pCi/g	09/11/21 14:30	09/22/21 11:31	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.1*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:31*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.194**		0.0804	0.0820	1.00	0.0516	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	**0.0311**		0.0352	0.0353	1.00	0.0311	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.239**		0.0879	0.0901	1.00	0.0403	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*79.2*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.610	U	0.661	0.664	5.00	1.11	pCi/g	09/27/21 10:38	09/29/21 06:56	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.512**		0.132	0.141		0.128	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Bismuth-212	0.205	U	0.537	0.537		0.948	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Bismuth-214	**0.444**		0.129	0.137		0.109	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Lead-212	**0.421**		0.0797	0.0959		0.0879	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Lead-214	**0.416**		0.0913	0.101		0.117	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Potassium-40	**3.11**		0.750	0.812		0.619	pCi/g	09/02/21 11:05	09/24/21 10:34	1

Client Sample ID: FSS-153-082621

Lab Sample ID: 160-43230-1
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.444**		0.129	0.137	1.00	0.109	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Thorium-232	**0.512**		0.132	0.141		0.128	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Americium-241	-0.0739	U	0.0600	0.0605		0.193	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Cesium-137	0.0313	U	0.0533	0.0534		0.0916	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Cobalt-60	-0.0544	U	0.0882	0.0884		0.0951	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Europium-152	0.0619	U	0.146	0.146		0.144	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Europium-154	0.0522	U	0.0854	0.0856		0.0985	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Europium-155	0.0795	U	0.288	0.288		0.491	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Sodium-22	-0.0504	U	0.0555	0.0557		0.0918	pCi/g	09/02/21 11:05	09/24/21 10:34	1
Zinc-65	0.000	U	0.0182	0.0182		0.194	pCi/g	09/02/21 11:05	09/24/21 10:34	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.965	U	1.23	1.24	5.00	2.17	pCi/g	09/22/21 12:05	09/30/21 15:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.6*		*40 - 110*	*09/22/21 12:05*	*09/30/21 15:59*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.72	U	1.56	1.57	5.00	2.99	pCi/g	09/12/21 17:54	10/01/21 09:00	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*82.1*		*30 - 110*	*09/12/21 17:54*	*10/01/21 09:00*	*1*

Client Sample ID: FSS-153-082621

Lab Sample ID: 160-43230-1
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 94.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.6**		0.27	0.016	mg/Kg	☼	09/27/21 14:42	09/28/21 14:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**64**		20	6.6	ug/Kg	☼	09/21/21 16:50	09/22/21 13:12	1

Client Sample ID: FSS-154-082621

Lab Sample ID: 160-43230-2
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0308	U	0.135	0.135	3.00	0.243	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Client Sample ID: FSS-154-082621

Date Collected: 08/26/21 10:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-2

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.0		40 - 110	09/20/21 16:47	10/07/21 20:45	1
Y Carrier	102		40 - 110	09/20/21 16:47	10/07/21 20:45	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.150	U	0.208	0.208	1.00	0.410	pCi/g	09/26/21 17:58	09/28/21 15:26	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0173	0.0173	1.00	0.0527	pCi/g	09/11/21 14:30	09/22/21 11:31	1
Plutonium-239/240	0.00593	U	0.0160	0.0160	1.00	0.0383	pCi/g	09/11/21 14:30	09/22/21 11:31	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	89.8		30 - 110	09/11/21 14:30	09/22/21 11:31	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.255**		0.0879	0.0904	1.00	0.0475	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0167	U	0.0269	0.0269	1.00	0.0462	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.195**		0.0767	0.0784	1.00	0.0429	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	89.2		30 - 110	09/12/21 17:52	09/22/21 15:46	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.501	U	0.786	0.788	5.00	1.34	pCi/g	09/27/21 10:38	09/29/21 08:04	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.505**		0.140	0.149		0.135	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Bismuth-212	-0.129	U	0.817	0.818		1.46	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Bismuth-214	**0.330**		0.115	0.120		0.114	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Lead-212	**0.394**		0.0890	0.0977		0.102	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Lead-214	**0.391**		0.134	0.140		0.136	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Potassium-40	**4.58**		0.926	1.03		0.359	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Radium-226	**0.330**		0.115	0.120	1.00	0.114	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Thorium-232	**0.505**		0.140	0.149		0.135	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Americium-241	0.0601	U	0.156	0.156		0.268	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Cesium-137	**0.146**		0.0436	0.0460		0.0250	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Cobalt-60	-0.0355	U	0.0791	0.0792		0.0890	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Europium-152	0.0605	U	0.101	0.102		0.167	pCi/g	09/02/21 11:05	09/24/21 10:35	1

Client Sample ID: FSS-154-082621

Lab Sample ID: 160-43230-2
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0741	U	0.136	0.136		0.118	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Europium-155	-0.0964	U	0.334	0.334		0.570	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Sodium-22	-0.00312	U	0.0317	0.0317		0.0645	pCi/g	09/02/21 11:05	09/24/21 10:35	1
Zinc-65	0.000	U	0.0164	0.0164		0.236	pCi/g	09/02/21 11:05	09/24/21 10:35	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.13	U	1.21	1.22	5.00	2.09	pCi/g	09/22/21 12:05	09/30/21 16:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*91.4*		*40 - 110*	*09/22/21 12:05*	*09/30/21 16:32*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.11	U	1.52	1.52	5.00	2.85	pCi/g	09/12/21 17:54	10/01/21 09:34	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.8*		*30 - 110*	*09/12/21 17:54*	*10/01/21 09:34*	*1*

Client Sample ID: FSS-154-082621

Lab Sample ID: 160-43230-2
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 92.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.1		0.28	0.017	mg/Kg	☼	09/27/21 14:42	09/28/21 14:42	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	87		20	6.6	ug/Kg	☼	09/21/21 16:50	09/22/21 13:19	1

Client Sample ID: FSS-155-082621

Lab Sample ID: 160-43230-3
Date Collected: 08/26/21 10:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.124	U	0.148	0.149	3.00	0.250	pCi/g	09/20/21 16:47	10/07/21 20:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.4*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:45*	*1*

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43230-1

Client Sample ID: FSS-155-082621

Date Collected: 08/26/21 10:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-3

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.138	U	0.236	0.236	1.00	0.409	pCi/g	09/26/21 17:58	09/28/21 15:48	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00202	U	0.0248	0.0248	1.00	0.0637	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.00608	U	0.0164	0.0164	1.00	0.0392	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.7*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.398**		0.114	0.118	1.00	0.0755	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0122	U	0.0283	0.0283	1.00	0.0604	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.292**		0.0964	0.0993	1.00	0.0616	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*82.9*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.577	U	0.522	0.526	5.00	0.866	pCi/g	09/27/21 10:38	09/29/21 08:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.470**		0.120	0.129		0.0587	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Bismuth-212	0.206	U	0.432	0.432		0.755	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Bismuth-214	**0.249**		0.0814	0.0853		0.0858	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Lead-212	**0.450**		0.0634	0.0853		0.0446	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Lead-214	**0.192**		0.0680	0.0708		0.150	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Potassium-40	**4.62**		0.747	0.879		0.232	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Radium-226	**0.249**		0.0814	0.0853	1.00	0.0858	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Thorium-232	**0.470**		0.120	0.129		0.0587	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Americium-241	-0.0292	U	0.104	0.104		0.179	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Cesium-137	**0.0832**		0.0316	0.0327		0.0251	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Cobalt-60	**0.0343**		0.0203	0.0205		0.0230	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Europium-152	0.00143	U	0.00245	0.00245		0.154	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Europium-154	0.0671	U	0.0682	0.0686		0.0986	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Europium-155	0.000	U	0.0629	0.0629		0.223	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Sodium-22	0.0181	U	0.0144	0.0146		0.0222	pCi/g	09/02/21 11:05	09/24/21 10:36	1
Zinc-65	0.000	U	0.0148	0.0148		0.182	pCi/g	09/02/21 11:05	09/24/21 10:36	1

Client Sample ID: FSS-155-082621

Lab Sample ID: 160-43230-3
Matrix: Solid
Date Collected: 08/26/21 10:30
Date Received: 08/27/21 10:15

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.35	U	1.26	1.27	5.00	2.17	pCi/g	09/22/21 12:05	09/30/21 17:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*88.0*		*40 - 110*	*09/22/21 12:05*	*09/30/21 17:06*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.825	U	1.61	1.61	5.00	2.98	pCi/g	09/12/21 17:54	10/01/21 10:07	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.7*		*30 - 110*	*09/12/21 17:54*	*10/01/21 10:07*	*1*

Client Sample ID: FSS-155-082621

Lab Sample ID: 160-43230-3
Matrix: Solid
Date Collected: 08/26/21 10:30
Date Received: 08/27/21 10:15
Percent Solids: 93.2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**7.9**		0.23	0.014	mg/Kg	☼	09/27/21 14:42	09/28/21 14:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**49**		19	6.2	ug/Kg	☼	09/21/21 16:50	09/22/21 13:22	1

Client Sample ID: FSS-156-082621

Lab Sample ID: 160-43230-4
Matrix: Solid
Date Collected: 08/26/21 11:30
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.616**		0.194	0.200	3.00	0.256	pCi/g	09/20/21 16:47	10/07/21 20:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*76.7*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:36*	*1*
Y Carrier	*102*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:36*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.162	U	0.203	0.203	1.00	0.403	pCi/g	09/26/21 17:58	09/28/21 16:11	1

Client Sample ID: FSS-156-082621

Date Collected: 08/26/21 11:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-4

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00620	U	0.0266	0.0266	1.00	0.0752	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	0.0207	U	0.0287	0.0287	1.00	0.0463	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*85.3*		*30 - 110*	*09/11/21 14:30*	*09/22/21 22:29*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.637**		0.153	0.162	1.00	0.0853	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	**0.0566**		0.0496	0.0498	1.00	0.0340	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.745**		0.162	0.174	1.00	0.0607	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.8*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.06	U	0.870	0.878	5.00	1.43	pCi/g	09/27/21 10:38	09/29/21 08:49	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**1.24**		0.323	0.346		0.333	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Bismuth-212	**2.20**		0.673	0.709		0.395	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Bismuth-214	**1.06**		0.206	0.233		0.150	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Lead-212	**1.23**		0.157	0.222		0.126	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Lead-214	**1.12**		0.220	0.248		0.191	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Potassium-40	**10.4**		1.69	1.99		0.997	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Radium-226	**1.06**		0.206	0.233	1.00	0.150	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Thorium-232	**1.24**		0.323	0.346		0.333	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Americium-241	0.0230	U	0.255	0.255		0.440	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Cesium-137	**0.812**		0.128	0.152		0.0725	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Cobalt-60	-0.0300	U	0.0973	0.0973		0.115	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Europium-152	0.168	U	0.136	0.137		0.320	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Europium-154	0.0655	U	0.0954	0.0956		0.234	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Europium-155	-0.137	U	0.169	0.169		0.592	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Sodium-22	0.0394	U	0.0502	0.0503		0.0836	pCi/g	09/02/21 11:05	09/24/21 10:37	1
Zinc-65	-0.00616	U	0.145	0.145		0.441	pCi/g	09/02/21 11:05	09/24/21 10:37	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.09	U	1.17	1.18	5.00	2.03	pCi/g	09/22/21 12:05	09/30/21 17:39	1

Client Sample ID: FSS-156-082621

Lab Sample ID: 160-43230-4
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	92.0		40 - 110	09/22/21 12:05	09/30/21 17:39	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.40	U	1.59	1.60	5.00	3.03	pCi/g	09/12/21 17:54	10/01/21 10:41	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	85.3		30 - 110	09/12/21 17:54	10/01/21 10:41	1

Client Sample ID: FSS-156-082621

Lab Sample ID: 160-43230-4
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 89.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	27		0.26	0.016	mg/Kg	☼	09/27/21 14:42	09/28/21 14:56	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	280		20	6.4	ug/Kg	☼	09/21/21 16:50	09/22/21 13:24	1

Client Sample ID: FSS-157-082621

Lab Sample ID: 160-43230-5
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.310		0.186	0.188	3.00	0.292	pCi/g	09/20/21 16:47	10/07/21 20:36	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.4		40 - 110	09/20/21 16:47	10/07/21 20:36	1
Y Carrier	99.8		40 - 110	09/20/21 16:47	10/07/21 20:36	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.214	U	0.200	0.201	1.00	0.411	pCi/g	09/26/21 17:58	09/28/21 16:34	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0102	U	0.0268	0.0268	1.00	0.0784	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	0.0102	U	0.0236	0.0236	1.00	0.0504	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.2		30 - 110	09/11/21 14:30	09/22/21 22:29	1

Client Sample ID: FSS-157-082621

Date Collected: 08/26/21 11:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-5

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.410**		0.116	0.120	1.00	0.0515	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0389	U	0.0409	0.0411	1.00	0.0501	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.413**		0.115	0.120	1.00	0.0402	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.4*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.335	U	0.761	0.762	5.00	1.31	pCi/g	09/27/21 10:38	09/29/21 09:12	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.641**		0.136	0.151		0.0742	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Bismuth-212	0.405	U	0.675	0.676		1.16	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Bismuth-214	**0.593**		0.118	0.132		0.0937	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Lead-212	**0.584**		0.0934	0.119		0.0985	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Lead-214	**0.528**		0.112	0.124		0.0981	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Potassium-40	**5.68**		0.988	1.14		0.639	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Radium-226	**0.593**		0.118	0.132	1.00	0.0937	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Thorium-232	**0.641**		0.136	0.151		0.0742	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Americium-241	0.0524	U	0.164	0.164		0.281	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Cesium-137	**0.249**		0.0626	0.0675		0.0529	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Cobalt-60	0.0116	U	0.0263	0.0264		0.0544	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Europium-152	0.100	U	0.247	0.247		0.174	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Europium-154	0.0330	U	0.0890	0.0891		0.128	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Europium-155	-0.000913	U	0.192	0.192		0.480	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Sodium-22	**0.0685**		0.0316	0.0323		0.0280	pCi/g	09/02/21 11:05	09/24/21 11:08	1
Zinc-65	0.0115	U	0.129	0.129		0.233	pCi/g	09/02/21 11:05	09/24/21 11:08	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.498	U	1.18	1.18	5.00	2.15	pCi/g	09/22/21 12:05	09/30/21 18:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.2*		*40 - 110*	*09/22/21 12:05*	*09/30/21 18:13*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.11	U	1.48	1.49	5.00	2.79	pCi/g	09/12/21 17:54	10/01/21 11:14	1

Client Sample ID: FSS-157-082621

Lab Sample ID: 160-43230-5
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	92.2		30 - 110	09/12/21 17:54	10/01/21 11:14	1

Client Sample ID: FSS-157-082621

Lab Sample ID: 160-43230-5
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 89.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**14**		0.24	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 14:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**99**		21	6.9	ug/Kg	☼	09/21/21 16:50	09/22/21 13:27	1

Client Sample ID: FSS-158-082621

Lab Sample ID: 160-43230-6
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.161	U	0.161	0.161	3.00	0.267	pCi/g	09/20/21 16:47	10/07/21 20:37	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	84.6		40 - 110	09/20/21 16:47	10/07/21 20:37	1
Y Carrier	101		40 - 110	09/20/21 16:47	10/07/21 20:37	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.122	U	0.211	0.211	1.00	0.411	pCi/g	09/26/21 17:58	09/28/21 16:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00795	U	0.0292	0.0292	1.00	0.0652	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	-0.00199	U	0.00390	0.00390	1.00	0.0385	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	101		30 - 110	09/11/21 14:30	09/22/21 22:29	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.311**		0.101	0.104	1.00	0.0410	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0211	U	0.0292	0.0293	1.00	0.0316	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.406**		0.116	0.121	1.00	0.0564	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Client Sample ID: FSS-158-082621

Date Collected: 08/26/21 11:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-6

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	83.0		30 - 110	09/12/21 17:52	09/22/21 15:46	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.715	U	0.649	0.654	5.00	1.07	pCi/g	09/27/21 10:38	09/29/21 09:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.408**		0.144	0.149		0.0971	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Bismuth-212	-0.216	U	0.759	0.759		1.35	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Bismuth-214	**0.275**		0.130	0.132		0.141	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Lead-212	**0.264**		0.0774	0.0819		0.0937	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Lead-214	**0.360**		0.117	0.123		0.124	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Potassium-40	**2.81**		0.743	0.793		0.377	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Radium-226	**0.275**		0.130	0.132	1.00	0.141	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Thorium-232	**0.408**		0.144	0.149		0.0971	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Americium-241	0.0422	U	0.154	0.154		0.266	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Cesium-137	**0.117**		0.0560	0.0572		0.0535	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Cobalt-60	-0.0304	U	0.0991	0.0992		0.111	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Europium-152	0.0824	U	0.142	0.142		0.171	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Europium-154	0.0898	U	0.0455	0.0464		0.123	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Europium-155	0.0323	U	0.106	0.106		0.533	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Sodium-22	0.0114	U	0.0355	0.0355		0.0677	pCi/g	09/02/21 11:05	09/24/21 11:09	1
Zinc-65	0.0500	U	0.114	0.114		0.203	pCi/g	09/02/21 11:05	09/24/21 11:09	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.21	U	1.20	1.21	5.00	2.07	pCi/g	09/22/21 12:05	09/30/21 18:46	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	97.0		40 - 110	09/22/21 12:05	09/30/21 18:46	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.17	U	1.29	1.29	5.00	2.42	pCi/g	09/12/21 17:54	10/01/21 11:48	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	101		30 - 110	09/12/21 17:54	10/01/21 11:48	1

Client Sample ID: FSS-158-082621

Lab Sample ID: 160-43230-6
Date Collected: 08/26/21 11:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 97.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.5**		0.24	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**18**	**J**	19	6.2	ug/Kg	☼	09/21/21 16:50	09/22/21 13:29	1

Client Sample ID: FSS-159-082621

Lab Sample ID: 160-43230-7
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.130	U	0.165	0.165	3.00	0.279	pCi/g	09/20/21 16:47	10/07/21 20:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*79.2*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:37*	*1*
Y Carrier	*97.9*		*40 - 110*	*09/20/21 16:47*	*10/07/21 20:37*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.111	U	0.211	0.211	1.00	0.407	pCi/g	09/26/21 17:58	09/28/21 17:19	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0136	U	0.0219	0.0220	1.00	0.0377	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	-0.00390	U	0.00541	0.00542	1.00	0.0437	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/11/21 14:30*	*09/22/21 22:29*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.241**		0.0909	0.0931	1.00	0.0490	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	-0.00544	U	0.00755	0.00756	1.00	0.0610	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.249**		0.0924	0.0946	1.00	0.0489	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*80.3*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.938	U	0.723	0.730	5.00	1.18	pCi/g	09/27/21 10:38	09/29/21 09:57	1

Client Sample ID: FSS-159-082621

Lab Sample ID: 160-43230-7

Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.705**		0.159	0.174		0.0786	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Bismuth-212	0.311	U	0.551	0.552		0.954	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Bismuth-214	**0.335**		0.105	0.111		0.102	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Lead-212	**0.406**		0.0860	0.100		0.101	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Lead-214	**0.437**		0.109	0.118		0.0936	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Potassium-40	**5.18**		0.971	1.10		0.666	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Radium-226	**0.335**		0.105	0.111	1.00	0.102	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Thorium-232	**0.705**		0.159	0.174		0.0786	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Americium-241	0.0470	U	0.126	0.127		0.175	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Cesium-137	0.0402	U	0.0706	0.0708		0.121	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Cobalt-60	**0.0475**		0.0289	0.0293		0.0306	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Europium-152	0.0802	U	0.135	0.135		0.152	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Europium-154	0.0526	U	0.0379	0.0383		0.109	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Europium-155	0.0520	U	0.111	0.111		0.295	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Sodium-22	**0.0321**		0.0222	0.0224		0.0295	pCi/g	09/02/21 11:05	09/24/21 10:33	1
Zinc-65	0.0143	U	0.136	0.136		0.245	pCi/g	09/02/21 11:05	09/24/21 10:33	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.836	U	1.53	1.53	5.00	2.79	pCi/g	09/22/21 12:05	09/30/21 19:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*80.0*		*40 - 110*	*09/22/21 12:05*	*09/30/21 19:20*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.000	U	1.41	1.41	5.00	2.53	pCi/g	09/12/21 17:54	10/01/21 12:21	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*103*		*30 - 110*	*09/12/21 17:54*	*10/01/21 12:21*	*1*

Client Sample ID: FSS-159-082621

Lab Sample ID: 160-43230-7

Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 95.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**26**		0.26	0.016	mg/Kg	☼	09/27/21 14:42	09/28/21 15:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**74**		19	6.2	ug/Kg	☼	09/21/21 16:50	09/22/21 13:37	1

Client Sample ID: FSS-160-082621

Date Collected: 08/26/21 13:15
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-8

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0830	U	0.180	0.180	3.00	0.316	pCi/g	09/21/21 13:22	10/08/21 20:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.1*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:22*	*1*
Y Carrier	*96.4*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:22*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.130	U	0.205	0.205	1.00	0.400	pCi/g	09/26/21 17:58	09/28/21 17:41	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0239	U	0.0221	0.0222	1.00	0.0826	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	-0.0240	U	0.0136	0.0137	1.00	0.0749	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*97.6*		*30 - 110*	*09/11/21 14:30*	*09/22/21 22:29*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.406**		0.115	0.120	1.00	0.0469	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.0182	U	0.0293	0.0294	1.00	0.0504	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.368**		0.110	0.114	1.00	0.0558	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.3*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:46*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.478	U	0.641	0.643	5.00	1.08	pCi/g	09/27/21 10:38	09/29/21 10:20	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.691**		0.148	0.163		0.0772	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Bismuth-212	0.0000000648	U	0.666	0.666		1.21	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Bismuth-214	**0.417**		0.117	0.125		0.106	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Lead-212	**0.517**		0.0867	0.109		0.0848	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Lead-214	**0.391**		0.109	0.116		0.104	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Potassium-40	**4.30**		0.887	0.986		0.654	pCi/g	08/31/21 16:48	09/29/21 13:22	1

Client Sample ID: FSS-160-082621

Lab Sample ID: 160-43230-8
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.417**		0.117	0.125	1.00	0.106	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Thorium-232	**0.691**		0.148	0.163		0.0772	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Americium-241	-0.0631	U	0.142	0.142		0.194	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Cesium-137	**0.413**		0.0667	0.0789		0.0207	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Cobalt-60	-0.0226	U	0.0612	0.0612		0.0905	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Europium-152	0.0755	U	0.160	0.160		0.135	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Europium-154	**0.136**		0.0568	0.0585		0.118	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Europium-155	-0.0738	U	0.206	0.206		0.351	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Sodium-22	0.0249	U	0.0324	0.0325		0.0543	pCi/g	08/31/21 16:48	09/29/21 13:22	1
Zinc-65	0.000	U	0.0137	0.0137		0.241	pCi/g	08/31/21 16:48	09/29/21 13:22	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.12	U	1.37	1.37	5.00	2.39	pCi/g	09/22/21 12:05	09/30/21 20:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*81.9*		*40 - 110*	*09/22/21 12:05*	*09/30/21 20:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.310	U	1.47	1.47	5.00	2.72	pCi/g	09/12/21 17:54	10/01/21 12:55	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*97.6*		*30 - 110*	*09/12/21 17:54*	*10/01/21 12:55*	*1*

Client Sample ID: FSS-160-082621

Lab Sample ID: 160-43230-8
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 89.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**19**		0.26	0.016	mg/Kg	☼	09/27/21 14:42	09/28/21 15:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**54**		20	6.5	ug/Kg	☼	09/21/21 16:50	09/22/21 13:40	1

Client Sample ID: FSS-161-082621

Lab Sample ID: 160-43230-9
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.341	U	0.275	0.276	3.00	0.436	pCi/g	09/21/21 13:22	10/08/21 20:32	1

Client Sample ID: FSS-161-082621

Date Collected: 08/26/21 13:15
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-9

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	75.8		40 - 110	09/21/21 13:22	10/08/21 20:32	1
Y Carrier	95.7		40 - 110	09/21/21 13:22	10/08/21 20:32	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.160	U	0.212	0.212	1.00	0.424	pCi/g	09/26/21 17:58	09/28/21 18:04	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0262	U	0.0298	0.0298	1.00	0.0419	pCi/g	09/11/21 14:30	09/22/21 22:29	1
Plutonium-239/240	0.0131	U	0.0211	0.0211	1.00	0.0362	pCi/g	09/11/21 14:30	09/22/21 22:29	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	97.7		30 - 110	09/11/21 14:30	09/22/21 22:29	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.412**		0.116	0.121	1.00	0.0551	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-235/236	0.00770	U	0.0207	0.0207	1.00	0.0497	pCi/g	09/12/21 17:52	09/22/21 15:46	1
Uranium-238	**0.393**		0.112	0.116	1.00	0.0398	pCi/g	09/12/21 17:52	09/22/21 15:46	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	83.3		30 - 110	09/12/21 17:52	09/22/21 15:46	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.502	U	0.705	0.707	5.00	1.20	pCi/g	09/27/21 10:38	09/29/21 10:43	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.701**		0.141	0.157		0.120	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Bismuth-212	0.449	U	0.803	0.804		1.38	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Bismuth-214	**0.695**		0.138	0.155		0.108	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Lead-212	**0.479**		0.0891	0.108		0.100	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Lead-214	**0.725**		0.147	0.164		0.127	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Potassium-40	**4.98**		0.939	1.06		0.643	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Radium-226	**0.695**		0.138	0.155	1.00	0.108	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Thorium-232	**0.701**		0.141	0.157		0.120	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Americium-241	-0.0744	U	0.195	0.195		0.333	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Cesium-137	0.0326	U	0.0636	0.0637		0.110	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Cobalt-60	-0.0120	U	0.0879	0.0879		0.0730	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Europium-152	0.111	U	0.209	0.209		0.276	pCi/g	09/02/21 11:50	09/30/21 06:38	1

Client Sample ID: FSS-161-082621

Lab Sample ID: 160-43230-9
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0174	U	0.0304	0.0304		0.133	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Europium-155	0.0336	U	0.101	0.101		0.326	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Sodium-22	-0.0143	U	0.0381	0.0381		0.0697	pCi/g	09/02/21 11:50	09/30/21 06:38	1
Zinc-65	0.000	U	0.0192	0.0192		0.184	pCi/g	09/02/21 11:50	09/30/21 06:38	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.952	U	1.20	1.21	5.00	2.10	pCi/g	09/22/21 12:05	09/30/21 21:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*88.7*		*40 - 110*	*09/22/21 12:05*	*09/30/21 21:01*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.907	U	1.36	1.36	5.00	2.52	pCi/g	09/12/21 17:54	10/01/21 13:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*97.7*		*30 - 110*	*09/12/21 17:54*	*10/01/21 13:28*	*1*

Client Sample ID: FSS-161-082621

Lab Sample ID: 160-43230-9
Date Collected: 08/26/21 13:15
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 97.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.5		0.25	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	41		18	5.8	ug/Kg	☼	09/21/21 16:50	09/22/21 13:42	1

Client Sample ID: FSS-162-082621

Lab Sample ID: 160-43230-10
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.442	U	0.290	0.292	3.00	0.447	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.3*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*
Y Carrier	*101*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*

Client Sample ID: FSS-162-082621

Date Collected: 08/26/21 13:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-10

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0733	U	0.216	0.216	1.00	0.412	pCi/g	09/26/21 17:58	09/28/21 18:27	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0215	U	0.0133	0.0135	1.00	0.0759	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	-0.00431	U	0.0198	0.0198	1.00	0.0647	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.0*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.142**		0.0721	0.0731	1.00	0.0739	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-235/236	0.000	U	0.00481	0.00481	1.00	0.0295	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.228**		0.0849	0.0869	1.00	0.0526	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.5*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:09*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.454	U	0.692	0.694	5.00	1.20	pCi/g	09/27/21 10:38	09/29/21 11:05	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.190	U	0.113	0.114		0.315	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Bismuth-212	0.185	U	0.478	0.478		0.854	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Bismuth-214	**0.262**		0.101	0.105		0.0957	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Lead-212	**0.384**		0.0838	0.0970		0.0965	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Lead-214	**0.389**		0.0925	0.101		0.0884	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Potassium-40	**4.14**		0.898	0.989		0.688	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Radium-226	**0.262**		0.101	0.105	1.00	0.0957	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Thorium-232	0.190	U	0.113	0.114		0.315	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Americium-241	-0.0508	U	0.131	0.131		0.180	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Cesium-137	**0.418**		0.0764	0.0875		0.0481	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Cobalt-60	-0.00232	U	0.0451	0.0451		0.0316	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Europium-152	0.0776	U	0.115	0.115		0.160	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Europium-154	0.0285	U	0.0507	0.0508		0.108	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Europium-155	0.000	U	0.0872	0.0872		0.351	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Sodium-22	-0.0290	U	0.0520	0.0521		0.0908	pCi/g	09/02/21 11:50	09/30/21 06:40	1
Zinc-65	0.000	U	0.0145	0.0145		0.232	pCi/g	09/02/21 11:50	09/30/21 06:40	1

Client Sample ID: FSS-162-082621

Lab Sample ID: 160-43230-10
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.765	U	1.02	1.02	5.00	1.73	pCi/g	09/29/21 15:43	10/05/21 20:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*72.9*		*40 - 110*	*09/29/21 15:43*	*10/05/21 20:16*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.42	U	1.52	1.53	5.00	2.55	pCi/g	09/12/21 17:38	09/30/21 12:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*89.0*		*30 - 110*	*09/12/21 17:38*	*09/30/21 12:17*	*1*

Client Sample ID: FSS-162-082621

Lab Sample ID: 160-43230-10
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 88.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.5		0.25	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	58		21	6.9	ug/Kg	☼	09/21/21 16:50	09/22/21 13:45	1

Client Sample ID: FSS-163-082621

Lab Sample ID: 160-43230-11
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.295	U	0.302	0.303	3.00	0.500	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*72.4*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*
Y Carrier	*94.6*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.135	U	0.208	0.209	1.00	0.410	pCi/g	09/26/21 17:58	09/28/21 18:50	1

Client Sample ID: FSS-163-082621

Date Collected: 08/26/21 13:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-11

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0312	U	0.0405	0.0406	1.00	0.0669	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.0246	U	0.0306	0.0307	1.00	0.0432	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*96.7*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.295**		0.105	0.108	1.00	0.0807	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.0524	U	0.0487	0.0489	1.00	0.0534	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.288**		0.0998	0.103	1.00	0.0496	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*88.8*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0842	U	0.745	0.745	5.00	1.33	pCi/g	09/27/21 10:38	09/29/21 11:28	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.368**		0.106	0.112		0.121	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Bismuth-212	0.299	U	0.489	0.490		0.840	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Bismuth-214	**0.385**		0.0966	0.104		0.0882	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Lead-212	**0.390**		0.0671	0.0833		0.0667	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Lead-214	**0.418**		0.0771	0.0880		0.0798	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Potassium-40	**4.06**		0.759	0.861		0.501	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Radium-226	**0.385**		0.0966	0.104	1.00	0.0882	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Thorium-232	**0.368**		0.106	0.112		0.121	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Americium-241	-0.0294	U	0.124	0.124		0.214	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Cesium-137	**0.223**		0.0500	0.0549		0.0299	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Cobalt-60	0.00108	U	0.0358	0.0358		0.0449	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Europium-152	0.0272	U	0.0794	0.0794		0.107	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Europium-154	0.0244	U	0.0767	0.0767		0.0881	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Europium-155	-0.00425	U	0.0102	0.0102		0.406	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Sodium-22	**0.0376**		0.0213	0.0216		0.0231	pCi/g	09/02/21 11:50	09/30/21 07:14	1
Zinc-65	0.000	U	0.0154	0.0154		0.173	pCi/g	09/02/21 11:50	09/30/21 07:14	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.822	U	0.996	1.00	5.00	1.73	pCi/g	09/29/21 15:43	10/05/21 21:22	1

Client Sample ID: FSS-163-082621

Lab Sample ID: 160-43230-11
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	83.0		40 - 110	09/29/21 15:43	10/05/21 21:22	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.380	U	1.32	1.32	5.00	2.43	pCi/g	09/12/21 17:38	09/30/21 13:24	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	96.7		30 - 110	09/12/21 17:38	09/30/21 13:24	1

Client Sample ID: FSS-163-082621

Lab Sample ID: 160-43230-11
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 99.9

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.0		0.23	0.014	mg/Kg	☼	09/27/21 14:42	09/28/21 15:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	71		18	5.9	ug/Kg	☼	09/21/21 16:50	09/22/21 13:47	1

Client Sample ID: FSS-164-082621

Lab Sample ID: 160-43230-12
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.609		0.312	0.316	3.00	0.457	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.3		40 - 110	09/21/21 13:22	10/08/21 20:33	1
Y Carrier	95.7		40 - 110	09/21/21 13:22	10/08/21 20:33	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.000591	U	0.219	0.219	1.00	0.401	pCi/g	09/26/21 17:58	09/28/21 19:12	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00231	U	0.0207	0.0207	1.00	0.0656	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.00231	U	0.0197	0.0197	1.00	0.0571	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	79.1		30 - 110	09/11/21 15:09	09/22/21 22:28	1

Client Sample ID: FSS-164-082621

Date Collected: 08/26/21 13:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-12

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.261**		0.0942	0.0966	1.00	0.0424	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.000	U	0.00535	0.00535	1.00	0.0327	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.291**		0.100	0.103	1.00	0.0541	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*74.9*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0938	U	0.677	0.677	5.00	1.22	pCi/g	09/27/21 10:38	09/29/21 11:51	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.525**		0.150	0.159		0.0859	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Bismuth-212	0.457	U	0.765	0.766		1.31	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Bismuth-214	**0.416**		0.136	0.142		0.129	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Lead-212	**0.417**		0.0871	0.0969		0.0978	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Lead-214	**0.331**		0.0974	0.103		0.100	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Potassium-40	**3.80**		0.812	0.894		0.333	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Radium-226	**0.416**		0.136	0.142	1.00	0.129	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Thorium-232	**0.525**		0.150	0.159		0.0859	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Americium-241	-0.0119	U	0.156	0.156		0.270	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Cesium-137	**0.170**		0.0453	0.0484		0.0232	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Cobalt-60	-0.0224	U	0.0872	0.0873		0.0983	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-152	0.0941	U	0.0512	0.0520		0.173	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-154	0.0316	U	0.0675	0.0675		0.116	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-155	0.0171	U	0.0516	0.0517		0.516	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Sodium-22	**0.0347**		0.0240	0.0243		0.0320	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Zinc-65	0.000	U	0.0215	0.0215		0.228	pCi/g	09/02/21 11:50	09/30/21 07:15	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.20	U	1.16	1.16	5.00	2.02	pCi/g	09/22/21 12:05	09/30/21 21:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*105*		*40 - 110*	*09/22/21 12:05*	*09/30/21 21:34*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.796	U	1.72	1.72	5.00	3.00	pCi/g	09/12/21 17:38	09/30/21 13:57	1

Client Sample ID: FSS-164-082621

Lab Sample ID: 160-43230-12
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	79.1		30 - 110	09/12/21 17:38	09/30/21 13:57	1

Client Sample ID: FSS-164-082621

Lab Sample ID: 160-43230-12
Date Collected: 08/26/21 13:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 93.4

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.5		0.24	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	71		19	6.2	ug/Kg	☼	09/21/21 16:50	09/22/21 13:50	1

Client Sample ID: FSS-165-082621

Lab Sample ID: 160-43230-13
Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0295	U	0.255	0.255	3.00	0.490	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	78.5		40 - 110	09/21/21 13:22	10/08/21 20:33	1
Y Carrier	89.7		40 - 110	09/21/21 13:22	10/08/21 20:33	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.243	U	0.195	0.196	1.00	0.404	pCi/g	09/26/21 17:58	09/28/21 19:35	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0133	U	0.0254	0.0254	1.00	0.0497	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.0111	U	0.0323	0.0323	1.00	0.0699	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	93.4		30 - 110	09/11/21 15:09	09/22/21 22:28	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.246		0.0922	0.0944	1.00	0.0430	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-235/236	0.00828	U	0.0223	0.0223	1.00	0.0535	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	0.184		0.0820	0.0834	1.00	0.0630	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Client Sample ID: FSS-165-082621

Date Collected: 08/26/21 14:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-13

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	77.2		30 - 110	09/12/21 17:35	09/23/21 20:09	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.392	U	0.829	0.831	5.00	1.43	pCi/g	09/27/21 10:38	09/29/21 12:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.425**		0.117	0.125		0.0688	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Bismuth-212	-0.186	U	0.543	0.544		0.961	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Bismuth-214	**0.249**		0.0720	0.0763		0.0485	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Lead-212	**0.394**		0.0670	0.0836		0.0572	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Lead-214	**0.340**		0.0675	0.0758		0.0383	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Potassium-40	**3.17**		0.670	0.741		0.272	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Radium-226	**0.249**		0.0720	0.0763	1.00	0.0485	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Thorium-232	**0.425**		0.117	0.125		0.0688	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Americium-241	-0.0641	U	0.140	0.140		0.239	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Cesium-137	**0.129**		0.0412	0.0432		0.0335	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Cobalt-60	0.0168	U	0.00949	0.00963		0.0504	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Europium-152	0.0601	U	0.0965	0.0967		0.143	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Europium-154	0.0500	U	0.0349	0.0353		0.0911	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Europium-155	-0.0150	U	0.209	0.209		0.360	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Sodium-22	0.0118	U	0.0265	0.0265		0.0487	pCi/g	08/31/21 16:48	09/29/21 14:01	1
Zinc-65	0.0422	U	0.0813	0.0814		0.143	pCi/g	08/31/21 16:48	09/29/21 14:01	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.601	U	1.27	1.27	5.00	2.27	pCi/g	09/22/21 12:05	09/30/21 22:08	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	88.9		40 - 110	09/22/21 12:05	09/30/21 22:08	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.461	U	1.32	1.32	5.00	2.43	pCi/g	09/12/21 17:38	09/30/21 14:31	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	93.4		30 - 110	09/12/21 17:38	09/30/21 14:31	1

Client Sample ID: FSS-165-082621

Lab Sample ID: 160-43230-13
Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 92.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	11		0.25	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	J	20	6.4	ug/Kg	☼	09/21/21 16:50	09/22/21 13:52	1

Client Sample ID: FSS-166-082621

Lab Sample ID: 160-43230-14
Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.104	U	0.213	0.213	3.00	0.380	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.6*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*
Y Carrier	*94.6*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.0206	U	0.227	0.227	1.00	0.416	pCi/g	09/26/21 17:58	09/28/21 19:57	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00755	U	0.0203	0.0203	1.00	0.0487	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	-0.00252	U	0.00494	0.00494	1.00	0.0487	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.8*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.221		0.0952	0.0969	1.00	0.0789	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.00598	U	0.0249	0.0249	1.00	0.0670	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	0.264		0.0997	0.102	1.00	0.0537	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*72.3*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.196	U	0.821	0.821	5.00	1.44	pCi/g	09/27/21 10:38	09/29/21 12:36	1

Client Sample ID: FSS-166-082621

Lab Sample ID: 160-43230-14

Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.289**		0.226	0.228		0.264	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Bismuth-212	**0.768**		0.336	0.345		0.283	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Bismuth-214	**0.491**		0.142	0.151		0.123	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Lead-212	**0.420**		0.0846	0.100		0.0882	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Lead-214	**0.275**		0.0968	0.101		0.131	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Potassium-40	**3.61**		0.884	0.955		0.735	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Radium-226	**0.491**		0.142	0.151	1.00	0.123	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Thorium-232	**0.289**		0.226	0.228		0.264	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Americium-241	0.0637	U	0.159	0.159		0.272	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Cesium-137	0.0309	U	0.0577	0.0578		0.0999	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Cobalt-60	-0.00143	U	0.0512	0.0512		0.0339	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-152	0.0190	U	0.0141	0.0143		0.194	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-154	-0.0104	U	0.0809	0.0809		0.141	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Europium-155	0.0665	U	0.131	0.131		0.377	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Sodium-22	0.0267	U	0.0213	0.0215		0.0327	pCi/g	09/02/21 11:50	09/30/21 07:15	1
Zinc-65	-0.0279	U	0.154	0.154		0.276	pCi/g	09/02/21 11:50	09/30/21 07:15	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	2.10	U	1.53	1.54	5.00	2.56	pCi/g	09/22/21 12:05	09/30/21 22:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*75.5*		*40 - 110*	*09/22/21 12:05*	*09/30/21 22:41*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.774	U	1.91	1.91	5.00	3.34	pCi/g	09/12/21 17:38	09/30/21 15:04	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.8*		*30 - 110*	*09/12/21 17:38*	*09/30/21 15:04*	*1*

Client Sample ID: FSS-166-082621

Lab Sample ID: 160-43230-14

Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 96.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.6**		0.23	0.014	mg/Kg	☼	09/27/21 14:42	09/28/21 15:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**28**		18	5.9	ug/Kg	☼	09/21/21 16:50	09/22/21 13:55	1

Client Sample ID: FSS-167-082621

Date Collected: 08/26/21 14:30
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-15

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.262	U	0.269	0.269	3.00	0.445	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.3*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*
Y Carrier	*95.3*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:33*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0552	U	0.219	0.219	1.00	0.413	pCi/g	09/26/21 17:58	09/28/21 20:20	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00668	U	0.0180	0.0180	1.00	0.0431	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.000	U	0.00437	0.00437	1.00	0.0267	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.9*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.170**		0.0789	0.0802	1.00	0.0598	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.0195	U	0.0313	0.0314	1.00	0.0539	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.167**		0.0789	0.0801	1.00	0.0635	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*91.7*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0763	U	0.656	0.656	5.00	1.16	pCi/g	09/27/21 10:38	09/29/21 12:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.226**		0.148	0.150		0.159	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Bismuth-212	0.000	U	0.334	0.334		0.804	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Bismuth-214	**0.272**		0.0780	0.0827		0.0726	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Lead-212	**0.380**		0.0643	0.0803		0.0573	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Lead-214	**0.330**		0.0840	0.0905		0.0757	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Potassium-40	**2.80**		0.658	0.715		0.517	pCi/g	09/02/21 11:50	09/30/21 07:50	1

Client Sample ID: FSS-167-082621

Lab Sample ID: 160-43230-15
Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.272**		0.0780	0.0827	1.00	0.0726	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Thorium-232	**0.226**		0.148	0.150		0.159	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Americium-241	0.0471	U	0.0967	0.0968		0.127	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Cesium-137	-0.00184	U	0.0279	0.0279		0.0643	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Cobalt-60	-0.0324	U	0.0762	0.0763		0.0835	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Europium-152	0.0616	U	0.0998	0.100		0.126	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Europium-154	**0.113**		0.0434	0.0449		0.0913	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Europium-155	0.0216	U	0.0667	0.0668		0.181	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Sodium-22	0.00540	U	0.0313	0.0313		0.0596	pCi/g	09/02/21 11:50	09/30/21 07:50	1
Zinc-65	0.00619	U	0.0976	0.0976		0.178	pCi/g	09/02/21 11:50	09/30/21 07:50	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.74	U	1.38	1.39	5.00	2.34	pCi/g	09/22/21 12:05	09/30/21 23:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*87.2*		*40 - 110*	*09/22/21 12:05*	*09/30/21 23:15*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	1.01	U	1.70	1.70	5.00	2.92	pCi/g	09/12/21 17:38	09/30/21 15:38	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*79.9*		*30 - 110*	*09/12/21 17:38*	*09/30/21 15:38*	*1*

Client Sample ID: FSS-167-082621

Lab Sample ID: 160-43230-15
Date Collected: 08/26/21 14:30
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 99.0

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**7.9**		0.27	0.016	mg/Kg	☼	09/27/21 14:42	09/28/21 15:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**24**		18	5.9	ug/Kg	☼	09/21/21 16:50	09/22/21 13:57	1

Client Sample ID: FSS-168-082621

Lab Sample ID: 160-43230-16
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.330	U	0.322	0.324	3.00	0.532	pCi/g	09/21/21 13:22	10/08/21 20:33	1

Client Sample ID: FSS-168-082621
Date Collected: 08/26/21 14:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-16
Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.3		40 - 110	09/21/21 13:22	10/08/21 20:33	1
Y Carrier	93.1		40 - 110	09/21/21 13:22	10/08/21 20:33	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.132	U	0.242	0.242	1.00	0.424	pCi/g	09/26/21 17:58	09/28/21 20:43	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0117	U	0.0398	0.0398	1.00	0.0897	pCi/g	09/11/21 15:09	09/23/21 10:32	1
Plutonium-239/240	0.000	U	0.0325	0.0325	1.00	0.0898	pCi/g	09/11/21 15:09	09/23/21 10:32	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	15.0	Q	30 - 110	09/11/21 15:09	09/23/21 10:32	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.434**		0.163	0.167	1.00	0.126	pCi/g	09/12/21 17:35	09/24/21 20:59	1
Uranium-235/236	0.0179	U	0.0352	0.0352	1.00	0.0538	pCi/g	09/12/21 17:35	09/24/21 20:59	1
Uranium-238	**0.423**		0.155	0.159	1.00	0.0909	pCi/g	09/12/21 17:35	09/24/21 20:59	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	18.8	Q	30 - 110	09/12/21 17:35	09/24/21 20:59	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.102	U	0.630	0.631	5.00	1.12	pCi/g	09/27/21 10:38	09/29/21 13:21	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.254	U	0.237	0.238		0.310	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Bismuth-212	-0.0143	U	0.679	0.679		1.25	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Bismuth-214	**0.501**		0.124	0.134		0.108	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Lead-212	**0.492**		0.102	0.114		0.118	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Lead-214	**0.484**		0.130	0.139		0.133	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Potassium-40	**6.17**		1.10	1.26		0.376	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Radium-226	**0.501**		0.124	0.134	1.00	0.108	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Thorium-232	0.254	U	0.237	0.238		0.310	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Americium-241	0.0630	U	0.155	0.156		0.267	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Cesium-137	0.0260	U	0.0514	0.0515		0.0901	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Cobalt-60	-0.0557	U	0.101	0.102		0.111	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Europium-152	0.0707	U	0.214	0.214		0.210	pCi/g	09/02/21 11:50	09/30/21 07:52	1

Client Sample ID: FSS-168-082621

Lab Sample ID: 160-43230-16
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Europium-154	0.0687	U	0.114	0.114		0.141	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Europium-155	-0.00746	U	0.0171	0.0171		0.589	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Sodium-22	-0.0114	U	0.0480	0.0480		0.0901	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Zinc-65	0.000	U	0.0171	0.0171		0.306	pCi/g	09/02/21 11:50	09/30/21 07:52	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.42	U	1.26	1.27	5.00	2.17	pCi/g	09/22/21 12:05	09/30/21 23:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*92.6*		*40 - 110*	*09/22/21 12:05*	*09/30/21 23:48*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	27.2	U	87.6	87.6	5.00	153	pCi/g	09/12/21 17:38	09/30/21 16:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*1.50*	*Q*	*30 - 110*	*09/12/21 17:38*	*09/30/21 16:11*	*1*

Client Sample ID: FSS-168-082621

Lab Sample ID: 160-43230-16
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 81.7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	13		0.27	0.017	mg/Kg	☼	09/27/21 14:42	09/28/21 15:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	34		24	7.7	ug/Kg	☼	09/21/21 16:50	09/22/21 14:00	1

Client Sample ID: FSS-169-082621

Lab Sample ID: 160-43230-17
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0875	U	0.212	0.212	3.00	0.428	pCi/g	09/21/21 13:22	10/08/21 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*81.8*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:34*	*1*
Y Carrier	*96.1*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:34*	*1*

Client Sample ID: FSS-169-082621

Date Collected: 08/26/21 14:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-17

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0506	U	0.225	0.225	1.00	0.430	pCi/g	09/26/21 17:58	09/28/21 21:05	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.00366	U	0.0124	0.0124	1.00	0.0280	pCi/g	09/11/21 15:09	09/23/21 10:32	1
Plutonium-239/240	0.00732	U	0.0102	0.0102	1.00	0.0110	pCi/g	09/11/21 15:09	09/23/21 10:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*47.9*		*30 - 110*	*09/11/21 15:09*	*09/23/21 10:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.212**		0.125	0.126	1.00	0.145	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	-0.0228	U	0.0200	0.0201	1.00	0.130	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.259**		0.122	0.124	1.00	0.0707	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*45.2*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	-0.0983	U	0.712	0.712	5.00	1.28	pCi/g	09/28/21 09:05	09/29/21 17:53	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.335**		0.131	0.135		0.172	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Bismuth-212	0.285	U	0.616	0.617		1.08	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Bismuth-214	**0.320**		0.0993	0.105		0.101	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Lead-212	**0.364**		0.0821	0.0942		0.0940	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Lead-214	**0.303**		0.0922	0.0972		0.0950	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Potassium-40	**4.92**		0.989	1.11		0.711	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Radium-226	**0.320**		0.0993	0.105	1.00	0.101	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Thorium-232	**0.335**		0.131	0.135		0.172	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Americium-241	-0.0671	U	0.168	0.168		0.288	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Cesium-137	**0.204**		0.0604	0.0639		0.0470	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Cobalt-60	-0.00138	U	0.0503	0.0503		0.0328	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-152	0.122	U	0.0798	0.0808		0.159	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-154	0.0699	U	0.116	0.116		0.120	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Europium-155	-0.0738	U	0.129	0.130		0.325	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Sodium-22	**0.0430**		0.0266	0.0270		0.0317	pCi/g	08/31/21 16:48	09/29/21 13:21	1
Zinc-65	0.000	U	0.0150	0.0150		0.247	pCi/g	08/31/21 16:48	09/29/21 13:21	1

Client Sample ID: FSS-169-082621

Lab Sample ID: 160-43230-17
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.49	U	1.32	1.33	5.00	2.29	pCi/g	09/22/21 12:05	10/01/21 00:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*91.8*		*40 - 110*	*09/22/21 12:05*	*10/01/21 00:22*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.101	U	2.64	2.64	5.00	4.75	pCi/g	09/12/21 17:38	09/30/21 16:45	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*47.9*		*30 - 110*	*09/12/21 17:38*	*09/30/21 16:45*	*1*

Client Sample ID: FSS-169-082621

Lab Sample ID: 160-43230-17
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 94.6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.4		0.25	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:54	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg	☼	09/21/21 16:50	09/22/21 14:07	1

Client Sample ID: FSS-170-082621

Lab Sample ID: 160-43230-18
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.188	U	0.255	0.256	3.00	0.437	pCi/g	09/21/21 13:22	10/08/21 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*87.1*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:34*	*1*
Y Carrier	*87.9*		*40 - 110*	*09/21/21 13:22*	*10/08/21 20:34*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.126	U	0.206	0.206	1.00	0.401	pCi/g	09/26/21 17:58	09/28/21 21:28	1

Client Sample ID: FSS-170-082621

Date Collected: 08/26/21 14:45
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43230-18

Matrix: Solid

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.00484	0.00484	1.00	0.0297	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.0198	U	0.0274	0.0275	1.00	0.0297	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.6*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.192**		0.0826	0.0841	1.00	0.0641	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.00797	U	0.0215	0.0215	1.00	0.0514	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.164**		0.0751	0.0763	1.00	0.0527	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*81.2*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.0901	U	0.804	0.804	5.00	1.43	pCi/g	09/28/21 09:05	09/29/21 18:16	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.355**		0.111	0.116		0.145	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Bismuth-212	0.000	U	0.133	0.133		0.813	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Bismuth-214	**0.236**		0.0885	0.0917		0.0908	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Lead-212	**0.250**		0.0675	0.0745		0.0809	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Lead-214	**0.237**		0.0824	0.0858		0.0839	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Potassium-40	**3.11**		0.773	0.834		0.653	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Radium-226	**0.236**		0.0885	0.0917	1.00	0.0908	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Thorium-232	**0.355**		0.111	0.116		0.145	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Americium-241	0.0210	U	0.107	0.107		0.150	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Cesium-137	0.0197	U	0.0382	0.0383		0.0670	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Cobalt-60	**0.0548**		0.0305	0.0310		0.0300	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Europium-152	-0.0115	U	0.0229	0.0229		0.151	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Europium-154	**0.130**		0.0557	0.0573		0.106	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Europium-155	0.00438	U	0.0574	0.0574		0.229	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Sodium-22	-0.0236	U	0.0487	0.0488		0.0862	pCi/g	09/02/21 11:50	09/30/21 07:17	1
Zinc-65	0.000	U	0.0388	0.0388		0.231	pCi/g	09/02/21 11:50	09/30/21 07:17	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.70	U	1.29	1.30	5.00	2.21	pCi/g	09/22/21 12:05	10/01/21 00:55	1

Client Sample ID: FSS-170-082621
Lab Sample ID: 160-43230-18
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.1*		*40 - 110*	*09/22/21 12:05*	*10/01/21 00:55*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.0648	U	1.85	1.85	5.00	3.31	pCi/g	09/12/21 17:38	09/30/21 17:18	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*69.6*		*30 - 110*	*09/12/21 17:38*	*09/30/21 17:18*	*1*

Client Sample ID: FSS-170-082621
Lab Sample ID: 160-43230-18
Date Collected: 08/26/21 14:45
Matrix: Solid
Date Received: 08/27/21 10:15
Percent Solids: 93.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**9.4**		0.25	0.015	mg/Kg	☼	09/27/21 14:42	09/28/21 15:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**31**		19	6.0	ug/Kg	☼	09/21/21 16:50	09/22/21 14:10	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-548779/1-A
Matrix: Solid
Analysis Batch: 551560

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548779

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/27/21 14:42	09/28/21 14:17	1

Lab Sample ID: LCS 280-548779/2-A
Matrix: Solid
Analysis Batch: 551560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548779

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	19.0		mg/Kg		95	84 - 118

Lab Sample ID: 160-43230-1 MS
Matrix: Solid
Analysis Batch: 551560

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 548779

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	5.6		15.6	19.9		mg/Kg	☼	91	84 - 118

Lab Sample ID: 160-43230-1 MSD
Matrix: Solid
Analysis Batch: 551560

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 548779

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	5.6		18.0	23.5		mg/Kg	☼	99	84 - 118	17	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-550513/1-A
Matrix: Solid
Analysis Batch: 550803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550513

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/21/21 16:50	09/22/21 15:15	1

Lab Sample ID: LCS 280-550513/2-A
Matrix: Solid
Analysis Batch: 550803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	356		ug/Kg		107	80 - 124

Lab Sample ID: 160-43230-1 MS
Matrix: Solid
Analysis Batch: 550803

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 550513

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	64		392	473		ug/Kg	☼	104	80 - 124

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 160-43230-1 MSD
Matrix: Solid
Analysis Batch: 550803

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 550513

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	64		400	474		ug/Kg	☼	102	80 - 124	0	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-527804/1-A
Matrix: Solid
Analysis Batch: 530588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527804

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1069	U	0.195	0.195	3.00	0.338	pCi/g	09/20/21 16:47	10/08/21 10:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*75.7*		*40 - 110*	*09/20/21 16:47*	*10/08/21 10:09*	*1*
Y Carrier	*101*		*40 - 110*	*09/20/21 16:47*	*10/08/21 10:09*	*1*

Lab Sample ID: LCS 160-527804/2-A
Matrix: Solid
Analysis Batch: 530525

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527804

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	6.549		0.792	3.00	0.406	pCi/g	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*52.3*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Lab Sample ID: 160-43220-A-5-H DU
Matrix: Solid
Analysis Batch: 530479

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527804

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.223	U		0.2266	U	0.177	3.00	0.285	pCi/g			0.03	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*78.9*		*40 - 110*
Y Carrier	*99.4*		*40 - 110*

Lab Sample ID: MB 160-527864/23-A
Matrix: Solid
Analysis Batch: 530558

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527864

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.09801	U	0.202	0.202	3.00	0.352	pCi/g	09/21/21 13:22	10/08/21 20:37	1

Method: 905 - Strontium-90 (GFPC) (Continued)

Lab Sample ID: MB 160-527864/23-A
Matrix: Solid
Analysis Batch: 530558

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527864

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	79.0		40 - 110	09/21/21 13:22	10/08/21 20:37	1
Y Carrier	88.6		40 - 110	09/21/21 13:22	10/08/21 20:37	1

Lab Sample ID: LCS 160-527864/1-A
Matrix: Solid
Analysis Batch: 530632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527864

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	6.269		0.730	3.00	0.352	pCi/g	82	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Sr Carrier	71.9		40 - 110
Y Carrier	90.5		40 - 110

Lab Sample ID: 160-43230-8 DU
Matrix: Solid
Analysis Batch: 530557

Client Sample ID: FSS-160-082621
Prep Type: Total/NA
Prep Batch: 527864

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.0830	U		0.4104	U	0.299	3.00	0.467	pCi/g			1.84	3

Carrier	DU %Yield	DU Qualifier	Limits
Sr Carrier	74.2		40 - 110
Y Carrier	99.8		40 - 110

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-528889/1-A
Matrix: Solid
Analysis Batch: 529300

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528889

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.1880	U	0.212	0.213	1.00	0.430	pCi/g	09/26/21 17:58	09/28/21 14:18	1

Lab Sample ID: LCS 160-528889/2-A
Matrix: Solid
Analysis Batch: 529300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528889

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.60	7.311		0.875	1.00	0.399	pCi/g	96	79 - 125		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43230-17 MS
Matrix: Solid
Analysis Batch: 529300

Client Sample ID: FSS-169-082621
Prep Type: Total/NA
Prep Batch: 528889

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	-0.0506	U	7.47	6.777		0.836	1.00	0.413	pCi/g	91	78 - 122

Lab Sample ID: 160-43230-18 DU
Matrix: Solid
Analysis Batch: 529300

Client Sample ID: FSS-170-082621
Prep Type: Total/NA
Prep Batch: 528889

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	-0.126	U	-0.1610	U	0.208	1.00	0.414	pCi/g	0.24	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526530/1-A
Matrix: Solid
Analysis Batch: 528536

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526530

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	-0.008128	U	0.00797	0.00799	1.00	0.0543	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235/236	0.02023	U	0.0357	0.0358	1.00	0.0675	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	0.02028	U	0.0281	0.0282	1.00	0.0454	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.5*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Lab Sample ID: LCS 160-526530/2-A
Matrix: Solid
Analysis Batch: 528538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526530

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	6.37	6.237		0.681	1.00	0.0468	pCi/g	98	76 - 117
Uranium-238	6.51	6.413		0.696	1.00	0.0250	pCi/g	98	78 - 118

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*91.9*		*30 - 110*

Lab Sample ID: 160-43230-10 DU
Matrix: Solid
Analysis Batch: 528539

Client Sample ID: FSS-162-082621
Prep Type: Total/NA
Prep Batch: 526530

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Uranium-233/234	0.142		0.2822		0.103	1.00	0.0559	pCi/g	2.17	3
Uranium-235/236	0.000	U	0.005618	U	0.0234	1.00	0.0629	pCi/g	0.46	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43230-10 DU
Matrix: Solid
Analysis Batch: 528539

Client Sample ID: FSS-162-082621
Prep Type: Total/NA
Prep Batch: 526530

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-238	0.228			0.3154		0.108	1.00	0.0270	pCi/g			1.23	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*88.6*		*30 - 110*

Lab Sample ID: MB 160-526534/1-A
Matrix: Solid
Analysis Batch: 528459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526534

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01009	U	0.0343	0.0343	1.00	0.0735	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-235/236	0.007533	U	0.0203	0.0203	1.00	0.0486	pCi/g	09/12/21 17:52	09/22/21 15:44	1
Uranium-238	0.01208	U	0.0230	0.0230	1.00	0.0451	pCi/g	09/12/21 17:52	09/22/21 15:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*96.9*		*30 - 110*	*09/12/21 17:52*	*09/22/21 15:44*	*1*

Lab Sample ID: LCS 160-526534/2-A
Matrix: Solid
Analysis Batch: 528461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526534

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.640		0.709	1.00	0.0387	pCi/g	104	76 - 117		
Uranium-238			6.51	6.719		0.716	1.00	0.0494	pCi/g	103	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*82.7*		*30 - 110*

Lab Sample ID: 160-43220-A-7-G DU
Matrix: Solid
Analysis Batch: 528465

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526534

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.212			0.2148		0.0840	1.00	0.0550	pCi/g			0.04	3
Uranium-235/236	0.0558	U		0.03130	U	0.0387	1.00	0.0596	pCi/g			0.77	3
Uranium-238	0.313			0.1873		0.0775	1.00	0.0478	pCi/g			1.92	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*90.2*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526442/1-A
Matrix: Solid
Analysis Batch: 528351

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526442

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.009800	U	0.0333	0.0333	1.00	0.0713	pCi/g	09/11/21 14:30	09/22/21 11:30	1
Plutonium-239/240	0.003924	U	0.0163	0.0163	1.00	0.0440	pCi/g	09/11/21 14:30	09/22/21 11:30	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.4*		*30 - 110*	*09/11/21 14:30*	*09/22/21 11:30*	*1*

Lab Sample ID: LCS 160-526442/2-A
Matrix: Solid
Analysis Batch: 528352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526442

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.19	4.891		0.551	1.00	0.0723	pCi/g	94	80 - 125
Plutonium-239/240	5.28	5.065		0.566	1.00	0.0465	pCi/g	96	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Lab Sample ID: MB 160-526443/1-A
Matrix: Solid
Analysis Batch: 528357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526443

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.004267	U	0.0177	0.0177	1.00	0.0478	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.008542	U	0.0251	0.0251	1.00	0.0570	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.9*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Lab Sample ID: LCS 160-526443/2-A
Matrix: Solid
Analysis Batch: 528358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526443

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Plutonium-238	5.19	5.060		0.583	1.00	0.0607	pCi/g	97	80 - 125
Plutonium-239/240	5.28	5.486		0.620	1.00	0.0256	pCi/g	104	81 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*86.1*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43230-10 DU
Matrix: Solid
Analysis Batch: 528360

Client Sample ID: FSS-162-082621
Prep Type: Total/NA
Prep Batch: 526443

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.0215	U		0.006830	U	0.0483	1.00	0.104	pCi/g			1.11	3
Plutonium-239/240	-0.00431	U		0.01595	U	0.0382	1.00	0.0776	pCi/g			0.92	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*92.2*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-528936/1-A
Matrix: Solid
Analysis Batch: 529502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528936

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.4459	U	0.839	0.841	5.00	1.44	pCi/g	09/27/21 10:38	09/29/21 06:11	1

Lab Sample ID: LCS 160-528936/2-A
Matrix: Solid
Analysis Batch: 529502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528936

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	83.36		9.34	5.00	1.43	pCi/g	99	75 - 125		

Lab Sample ID: 160-43230-1 MS
Matrix: Solid
Analysis Batch: 529502

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 528936

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	0.610	U	67.5	67.41		7.55	5.00	1.14	pCi/g	99	29 - 128		

Lab Sample ID: 160-43230-1 DU
Matrix: Solid
Analysis Batch: 529502

Client Sample ID: FSS-153-082621
Prep Type: Total/NA
Prep Batch: 528936

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	0.610	U		0.09502	U	0.637	5.00	1.12	pCi/g			1.10	3

Lab Sample ID: MB 160-529126/1-A
Matrix: Solid
Analysis Batch: 529503

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529126

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.3198	U	0.809	0.809	5.00	1.40	pCi/g	09/28/21 09:05	09/29/21 14:07	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-529126/2-A
Matrix: Solid
Analysis Batch: 529503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529126

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	81.71		9.16	5.00	1.40	pCi/g	97	75 - 125		

Lab Sample ID: 160-43414-A-2-C MS
Matrix: Solid
Analysis Batch: 529503

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 529126

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	1.02	U	84.4	88.02		9.83	5.00	1.41	pCi/g	103	29 - 128		

Lab Sample ID: 160-43414-A-2-D MSD
Matrix: Solid
Analysis Batch: 529503

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 529126

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Carbon-14	1.02	U	74.0	73.65		8.25	5.00	1.23	pCi/g	98	29 - 128	2.19	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-525011/1-A
Matrix: Solid
Analysis Batch: 529305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525011

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	-0.03204	U	0.149	0.149		0.184	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Bismuth-212	-0.2904	U	0.570	0.571		0.999	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Bismuth-214	-0.03458	U	0.113	0.113		0.207	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Lead-212	0.004431	U	0.0560	0.0560		0.101	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Lead-214	0.1365		0.0820	0.0832		0.119	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Potassium-40	0.1353	U	0.414	0.415		0.757	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Radium-226	-0.03458	U	0.113	0.113	1.00	0.207	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Thorium-232	-0.03204	U	0.149	0.149		0.184	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Americium-241	0.09030		0.0557	0.0564		0.0624	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Cesium-137	0.002510	U	0.0422	0.0422		0.0792	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Cobalt-60	0.01081	U	0.0100	0.0101		0.0362	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-152	0.08791	U	0.0478	0.0486		0.125	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-154	0.02761	U	0.0579	0.0580		0.0670	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Europium-155	0.0000	U	0.0283	0.0283		0.300	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Sodium-22	0.03319	U	0.0246	0.0248		0.0349	pCi/g	08/31/21 16:48	09/29/21 13:58	1
Zinc-65	0.0000	U	0.0404	0.0404		0.235	pCi/g	08/31/21 16:48	09/29/21 13:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-525011/2-A
Matrix: Solid
Analysis Batch: 529302

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525011

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	103.6		11.9		1.21	pCi/g	108	87 - 116		
Cesium-137			26.2	29.49		3.04		0.254	pCi/g	112	87 - 120		
Cobalt-60			8.53	9.061		0.946		0.149	pCi/g	106	87 - 115		

Lab Sample ID: 160-43230-8 DU
Matrix: Solid
Analysis Batch: 529304

Client Sample ID: FSS-160-082621
Prep Type: Total/NA
Prep Batch: 525011

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.691			0.5457		0.163		0.126	pCi/g			1.24	2
Bismuth-212	0.0000000648	U		0.4939	U	1.12		1.92	pCi/g			0.74	2
Bismuth-214	0.417			0.3715		0.111		0.0993	pCi/g			0.53	2
Lead-212	0.517			0.4949		0.108		0.0914	pCi/g			0.28	2
Lead-214	0.391			0.3997		0.113		0.109	pCi/g			0.10	2
Potassium-40	4.30			3.630		0.920		0.678	pCi/g			0.98	2
Radium-226	0.417			0.3715		0.111	1.00	0.0993	pCi/g			0.53	2
Thorium-232	0.691			0.5457		0.163		0.126	pCi/g			1.24	2
Americium-241	-0.0631	U		0.05595	U	0.141		0.241	pCi/g			1.17	2
Cesium-137	0.413			0.4271		0.0875		0.0465	pCi/g			0.24	2
Cobalt-60	-0.0226	U		0.004339	U	0.0627		0.0770	pCi/g			0.60	2
Europium-152	0.0755	U		0.02677	U	0.0824		0.189	pCi/g			0.53	2
Europium-154	0.136			0.03847	U	0.112		0.129	pCi/g			1.51	2
Europium-155	-0.0738	U		0.1859		0.141		0.164	pCi/g			2.04	2
Sodium-22	0.0249	U		-0.02323	U	0.0418		0.0735	pCi/g			1.78	2
Zinc-65	0.000	U		0.0000	U	0.0640		0.193	pCi/g			0	2

Lab Sample ID: MB 160-525244/1-A
Matrix: Solid
Analysis Batch: 528728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525244

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.04231	U	0.111	0.111		0.270	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Bismuth-212	-0.3410	U	0.733	0.734		1.29	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Bismuth-214	-0.08077	U	0.124	0.124		0.421	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Lead-212	-0.04483	U	0.148	0.148		0.205	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Lead-214	-0.04880	U	0.0629	0.0631		0.201	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Potassium-40	-0.4152	U	0.770	0.771		1.19	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Radium-226	-0.08077	U	0.124	0.124	1.00	0.421	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Thorium-232	0.04231	U	0.111	0.111		0.270	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Americium-241	0.04333	U	0.0992	0.0993		0.140	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Cesium-137	-0.02750	U	0.0681	0.0681		0.120	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Cobalt-60	-0.001212	U	0.0649	0.0649		0.0836	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-152	0.08254	U	0.117	0.117		0.108	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-154	0.04157	U	0.0703	0.0704		0.0893	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Europium-155	-0.07216	U	0.219	0.220		0.377	pCi/g	09/02/21 11:05	09/24/21 11:11	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-525244/1-A
Matrix: Solid
Analysis Batch: 528728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525244

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Sodium-22	0.02822	U	0.0247	0.0249		0.0416	pCi/g	09/02/21 11:05	09/24/21 11:11	1
Zinc-65	0.0000	U	0.0197	0.0197		0.215	pCi/g	09/02/21 11:05	09/24/21 11:11	1

Lab Sample ID: LCS 160-525244/2-A
Matrix: Solid
Analysis Batch: 528705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525244

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	101.9		10.5		1.02	pCi/g	106	87 - 116		
Cesium-137			26.2	26.70		2.79		0.144	pCi/g	102	87 - 120		
Cobalt-60			8.54	8.653		0.902		0.0916	pCi/g	101	87 - 115		

Lab Sample ID: 160-43230-7 DU
Matrix: Solid
Analysis Batch: 528706

Client Sample ID: FSS-159-082621
Prep Type: Total/NA
Prep Batch: 525244

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.705			0.4722		0.131		0.0627	pCi/g			2.09	2
Bismuth-212	0.311	U		0.9352		0.328		0.203	pCi/g			1.91	2
Bismuth-214	0.335			0.4007		0.104		0.0829	pCi/g			0.85	2
Lead-212	0.406			0.4810		0.0937		0.0614	pCi/g			1.07	2
Lead-214	0.437			0.3336		0.0791		0.0869	pCi/g			1.42	2
Potassium-40	5.18			6.620		1.14		0.248	pCi/g			1.79	2
Radium-226	0.335			0.4007		0.104	1.00	0.0829	pCi/g			0.85	2
Thorium-232	0.705			0.4722		0.131		0.0627	pCi/g			2.09	2
Americium-241	0.0470	U		0.01341	U	0.124		0.215	pCi/g			0.37	2
Cesium-137	0.0402	U		0.0000	U	0.0244		0.0771	pCi/g			1.05	2
Cobalt-60	0.0475			0.004441	U	0.0372		0.0460	pCi/g			1.78	2
Europium-152	0.0802	U		0.09656	U	0.135		0.128	pCi/g			0.17	2
Europium-154	0.0526	U		-0.03643	U	0.0639		0.109	pCi/g			2.34	2
Europium-155	0.0520	U		-0.07656	U	0.216		0.367	pCi/g			1.04	2
Sodium-22	0.0321			0.02301	U	0.0272		0.0444	pCi/g			0.50	2
Zinc-65	0.0143	U		0.0000	U	0.0317		0.213	pCi/g			0.20	2

Lab Sample ID: MB 160-525251/1-A
Matrix: Solid
Analysis Batch: 529515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525251

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.01843	U	0.0999	0.0999		0.270	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Bismuth-212	-0.01624	U	0.565	0.565		1.08	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Bismuth-214	0.06348	U	0.124	0.124		0.361	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Lead-212	-0.03452	U	0.0833	0.0834		0.177	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Lead-214	-0.01990	U	0.105	0.105		0.193	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Potassium-40	-0.2975	U	0.787	0.788		1.19	pCi/g	09/02/21 11:50	09/30/21 07:52	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-525251/1-A
Matrix: Solid
Analysis Batch: 529515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525251

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06348	U	0.124	0.124	1.00	0.361	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Thorium-232	0.01843	U	0.0999	0.0999		0.270	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Americium-241	0.04132	U	0.0948	0.0949		0.134	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Cesium-137	-0.04901	U	0.0802	0.0804		0.138	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Cobalt-60	-0.04015	U	0.134	0.134		0.110	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Europium-152	0.03714	U	0.0700	0.0701		0.170	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Europium-154	0.06926	U	0.0554	0.0559		0.110	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Europium-155	0.0000	U	0.0327	0.0327		0.269	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Sodium-22	0.0000	U	0.0156	0.0156		0.0416	pCi/g	09/02/21 11:50	09/30/21 07:52	1
Zinc-65	-0.08930	U	0.216	0.216		0.377	pCi/g	09/02/21 11:50	09/30/21 07:52	1

Lab Sample ID: LCS 160-525251/2-A
Matrix: Solid
Analysis Batch: 529532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525251

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	98.73		10.1		1.02	pCi/g	103	87 - 116		
Cesium-137			26.2	26.59		2.77		0.168	pCi/g	101	87 - 120		
Cobalt-60			8.53	8.258		0.852		0.0308	pCi/g	97	87 - 115		

Lab Sample ID: 160-43230-18 DU
Matrix: Solid
Analysis Batch: 529526

Client Sample ID: FSS-170-082621
Prep Type: Total/NA
Prep Batch: 525251

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	0.355			0.2917		0.162		0.176	pCi/g			0.63	2
Bismuth-212	0.000	U		-0.3994	U	0.804		1.39	pCi/g			0.96	2
Bismuth-214	0.236			0.04511	U	0.139		0.244	pCi/g			2.24	2
Lead-212	0.250			0.2663		0.0795		0.0884	pCi/g			0.30	2
Lead-214	0.237			0.2727		0.0853		0.0873	pCi/g			0.57	2
Potassium-40	3.11			2.517		0.771		0.677	pCi/g			1.03	2
Radium-226	0.236			0.04511	U	0.139	1.00	0.244	pCi/g			2.24	2
Thorium-232	0.355			0.2917		0.162		0.176	pCi/g			0.63	2
Americium-241	0.0210	U		-0.04231	U	0.153		0.263	pCi/g			0.66	2
Cesium-137	0.0197	U		0.01424	U	0.0305		0.0545	pCi/g			0.22	2
Cobalt-60	0.0548			0.002908	U	0.0364		0.0584	pCi/g			2.12	2
Europium-152	-0.0115	U		0.1538		0.0881		0.134	pCi/g			3.56	2
Europium-154	0.130			0.03583	U	0.0488		0.111	pCi/g			2.46	2
Europium-155	0.00438	U		0.03189	U	0.0863		0.305	pCi/g			0.52	2
Sodium-22	-0.0236	U		0.0000	U	0.0114		0.0302	pCi/g			0.92	2
Zinc-65	0.000	U		-0.06191	U	0.121		0.211	pCi/g			0.95	2

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-528330/1-A
Matrix: Solid
Analysis Batch: 529698

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528330

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.791	U	1.20	1.21	5.00	1.98	pCi/g	09/22/21 12:05	09/30/21 13:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.1*		*40 - 110*	*09/22/21 12:05*	*09/30/21 13:45*	*1*

Lab Sample ID: LCS 160-528330/2-A
Matrix: Solid
Analysis Batch: 529698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528330

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	19.26		2.98	5.00	2.29	pCi/g	89	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*91.1*		*40 - 110*

Lab Sample ID: 160-43230-7 DU
Matrix: Solid
Analysis Batch: 529698

Client Sample ID: FSS-159-082621
Prep Type: Total/NA
Prep Batch: 528330

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.836	U		1.949	U	1.32	5.00	2.17	pCi/g			1.08	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*93.5*		*40 - 110*

Lab Sample ID: MB 160-529474/1-A
Matrix: Solid
Analysis Batch: 530420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529474

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.5437	U	1.14	1.14	5.00	2.00	pCi/g	09/29/21 15:43	10/05/21 14:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*71.4*		*40 - 110*	*09/29/21 15:43*	*10/05/21 14:45*	*1*

Lab Sample ID: LCS 160-529474/2-A
Matrix: Solid
Analysis Batch: 530420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529474

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	25.73		3.25	5.00	1.87	pCi/g	120	75 - 125		

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-529474/2-A
Matrix: Solid
Analysis Batch: 530420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529474

Carrier	LCS %Yield	LCS Qualifier	Limits
Ni	74.5		40 - 110

Lab Sample ID: 160-43230-11 DU
Matrix: Solid
Analysis Batch: 530420

Client Sample ID: FSS-163-082621
Prep Type: Total/NA
Prep Batch: 529474

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.822	U		0.7448	U	0.978	5.00	1.69	pCi/g			0.11	3

Carrier	DU %Yield	DU Qualifier	Limits
Ni	82.1		40 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526531/1-A
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526531

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.1078	U	1.39	1.39	5.00	2.47	pCi/g	09/12/21 17:38	09/30/21 11:10	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	91.9		30 - 110	09/12/21 17:38	09/30/21 11:10	1

Lab Sample ID: LCS 160-526531/2-A
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526531

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	18.68		3.08	5.00	2.73	pCi/g	94	75 - 125		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	86.1		30 - 110

Lab Sample ID: 160-43230-10 DU
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: FSS-162-082621
Prep Type: Total/NA
Prep Batch: 526531

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.42	U		0.1767	U	1.41	5.00	2.50	pCi/g			1.17	3

Tracer	DU %Yield	DU Qualifier	Limits
Pu-242 (T)	92.2		30 - 110

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Lab Sample ID: MB 160-526535/1-A
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526535

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.191	U	1.50	1.50	5.00	2.82	pCi/g	09/12/21 17:54	10/01/21 01:44	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*90.4*		*30 - 110*	*09/12/21 17:54*	*10/01/21 01:44*	*1*

Lab Sample ID: LCS 160-526535/2-A
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526535

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	17.52		2.85	5.00	2.61	pCi/g	88	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*100*		*30 - 110*

Lab Sample ID: 160-43220-A-7-I DU
Matrix: Solid
Analysis Batch: 530091

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526535

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	-1.51	U		-0.6282	U	1.44	5.00	2.68	pCi/g			0.89	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*101*		*30 - 110*

Metals

Prep Batch: 548779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	3050B	
160-43230-2	FSS-154-082621	Total/NA	Solid	3050B	
160-43230-3	FSS-155-082621	Total/NA	Solid	3050B	
160-43230-4	FSS-156-082621	Total/NA	Solid	3050B	
160-43230-5	FSS-157-082621	Total/NA	Solid	3050B	
160-43230-6	FSS-158-082621	Total/NA	Solid	3050B	
160-43230-7	FSS-159-082621	Total/NA	Solid	3050B	
160-43230-8	FSS-160-082621	Total/NA	Solid	3050B	
160-43230-9	FSS-161-082621	Total/NA	Solid	3050B	
160-43230-10	FSS-162-082621	Total/NA	Solid	3050B	
160-43230-11	FSS-163-082621	Total/NA	Solid	3050B	
160-43230-12	FSS-164-082621	Total/NA	Solid	3050B	
160-43230-13	FSS-165-082621	Total/NA	Solid	3050B	
160-43230-14	FSS-166-082621	Total/NA	Solid	3050B	
160-43230-15	FSS-167-082621	Total/NA	Solid	3050B	
160-43230-16	FSS-168-082621	Total/NA	Solid	3050B	
160-43230-17	FSS-169-082621	Total/NA	Solid	3050B	
160-43230-18	FSS-170-082621	Total/NA	Solid	3050B	
MB 280-548779/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-548779/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43230-1 MS	FSS-153-082621	Total/NA	Solid	3050B	
160-43230-1 MSD	FSS-153-082621	Total/NA	Solid	3050B	

Prep Batch: 550513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	7471B	
160-43230-2	FSS-154-082621	Total/NA	Solid	7471B	
160-43230-3	FSS-155-082621	Total/NA	Solid	7471B	
160-43230-4	FSS-156-082621	Total/NA	Solid	7471B	
160-43230-5	FSS-157-082621	Total/NA	Solid	7471B	
160-43230-6	FSS-158-082621	Total/NA	Solid	7471B	
160-43230-7	FSS-159-082621	Total/NA	Solid	7471B	
160-43230-8	FSS-160-082621	Total/NA	Solid	7471B	
160-43230-9	FSS-161-082621	Total/NA	Solid	7471B	
160-43230-10	FSS-162-082621	Total/NA	Solid	7471B	
160-43230-11	FSS-163-082621	Total/NA	Solid	7471B	
160-43230-12	FSS-164-082621	Total/NA	Solid	7471B	
160-43230-13	FSS-165-082621	Total/NA	Solid	7471B	
160-43230-14	FSS-166-082621	Total/NA	Solid	7471B	
160-43230-15	FSS-167-082621	Total/NA	Solid	7471B	
160-43230-16	FSS-168-082621	Total/NA	Solid	7471B	
160-43230-17	FSS-169-082621	Total/NA	Solid	7471B	
160-43230-18	FSS-170-082621	Total/NA	Solid	7471B	
MB 280-550513/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-550513/2-A	Lab Control Sample	Total/NA	Solid	7471B	
160-43230-1 MS	FSS-153-082621	Total/NA	Solid	7471B	
160-43230-1 MSD	FSS-153-082621	Total/NA	Solid	7471B	

Analysis Batch: 550803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	7471B	550513

Metals (Continued)

Analysis Batch: 550803 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-2	FSS-154-082621	Total/NA	Solid	7471B	550513
160-43230-3	FSS-155-082621	Total/NA	Solid	7471B	550513
160-43230-4	FSS-156-082621	Total/NA	Solid	7471B	550513
160-43230-5	FSS-157-082621	Total/NA	Solid	7471B	550513
160-43230-6	FSS-158-082621	Total/NA	Solid	7471B	550513
160-43230-7	FSS-159-082621	Total/NA	Solid	7471B	550513
160-43230-8	FSS-160-082621	Total/NA	Solid	7471B	550513
160-43230-9	FSS-161-082621	Total/NA	Solid	7471B	550513
160-43230-10	FSS-162-082621	Total/NA	Solid	7471B	550513
160-43230-11	FSS-163-082621	Total/NA	Solid	7471B	550513
160-43230-12	FSS-164-082621	Total/NA	Solid	7471B	550513
160-43230-13	FSS-165-082621	Total/NA	Solid	7471B	550513
160-43230-14	FSS-166-082621	Total/NA	Solid	7471B	550513
160-43230-15	FSS-167-082621	Total/NA	Solid	7471B	550513
160-43230-16	FSS-168-082621	Total/NA	Solid	7471B	550513
160-43230-17	FSS-169-082621	Total/NA	Solid	7471B	550513
160-43230-18	FSS-170-082621	Total/NA	Solid	7471B	550513
MB 280-550513/1-A	Method Blank	Total/NA	Solid	7471B	550513
LCS 280-550513/2-A	Lab Control Sample	Total/NA	Solid	7471B	550513
160-43230-1 MS	FSS-153-082621	Total/NA	Solid	7471B	550513
160-43230-1 MSD	FSS-153-082621	Total/NA	Solid	7471B	550513

Analysis Batch: 551560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	6020B	548779
160-43230-2	FSS-154-082621	Total/NA	Solid	6020B	548779
160-43230-3	FSS-155-082621	Total/NA	Solid	6020B	548779
160-43230-4	FSS-156-082621	Total/NA	Solid	6020B	548779
160-43230-5	FSS-157-082621	Total/NA	Solid	6020B	548779
160-43230-6	FSS-158-082621	Total/NA	Solid	6020B	548779
160-43230-7	FSS-159-082621	Total/NA	Solid	6020B	548779
160-43230-8	FSS-160-082621	Total/NA	Solid	6020B	548779
160-43230-9	FSS-161-082621	Total/NA	Solid	6020B	548779
160-43230-10	FSS-162-082621	Total/NA	Solid	6020B	548779
160-43230-11	FSS-163-082621	Total/NA	Solid	6020B	548779
160-43230-12	FSS-164-082621	Total/NA	Solid	6020B	548779
160-43230-13	FSS-165-082621	Total/NA	Solid	6020B	548779
160-43230-14	FSS-166-082621	Total/NA	Solid	6020B	548779
160-43230-15	FSS-167-082621	Total/NA	Solid	6020B	548779
160-43230-16	FSS-168-082621	Total/NA	Solid	6020B	548779
160-43230-17	FSS-169-082621	Total/NA	Solid	6020B	548779
160-43230-18	FSS-170-082621	Total/NA	Solid	6020B	548779
MB 280-548779/1-A	Method Blank	Total/NA	Solid	6020B	548779
LCS 280-548779/2-A	Lab Control Sample	Total/NA	Solid	6020B	548779
160-43230-1 MS	FSS-153-082621	Total/NA	Solid	6020B	548779
160-43230-1 MSD	FSS-153-082621	Total/NA	Solid	6020B	548779

General Chemistry

Analysis Batch: 548701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	Moisture	
160-43230-2	FSS-154-082621	Total/NA	Solid	Moisture	
160-43230-3	FSS-155-082621	Total/NA	Solid	Moisture	
160-43230-4	FSS-156-082621	Total/NA	Solid	Moisture	
160-43230-5	FSS-157-082621	Total/NA	Solid	Moisture	
160-43230-6	FSS-158-082621	Total/NA	Solid	Moisture	
160-43230-7	FSS-159-082621	Total/NA	Solid	Moisture	
160-43230-8	FSS-160-082621	Total/NA	Solid	Moisture	
160-43230-9	FSS-161-082621	Total/NA	Solid	Moisture	
160-43230-10	FSS-162-082621	Total/NA	Solid	Moisture	
160-43230-11	FSS-163-082621	Total/NA	Solid	Moisture	
160-43230-12	FSS-164-082621	Total/NA	Solid	Moisture	
160-43230-13	FSS-165-082621	Total/NA	Solid	Moisture	
160-43230-14	FSS-166-082621	Total/NA	Solid	Moisture	
160-43230-15	FSS-167-082621	Total/NA	Solid	Moisture	
160-43230-16	FSS-168-082621	Total/NA	Solid	Moisture	
160-43230-17	FSS-169-082621	Total/NA	Solid	Moisture	
160-43230-18	FSS-170-082621	Total/NA	Solid	Moisture	
160-43230-18 DU	FSS-170-082621	Total/NA	Solid	Moisture	

Rad

Leach Batch: 524327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43220-A-5-H DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43220-A-7-G DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 524348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	Dry and Grind	
160-43230-2	FSS-154-082621	Total/NA	Solid	Dry and Grind	
160-43230-3	FSS-155-082621	Total/NA	Solid	Dry and Grind	
160-43230-4	FSS-156-082621	Total/NA	Solid	Dry and Grind	
160-43230-5	FSS-157-082621	Total/NA	Solid	Dry and Grind	
160-43230-6	FSS-158-082621	Total/NA	Solid	Dry and Grind	
160-43230-7	FSS-159-082621	Total/NA	Solid	Dry and Grind	
160-43230-8	FSS-160-082621	Total/NA	Solid	Dry and Grind	
160-43230-9	FSS-161-082621	Total/NA	Solid	Dry and Grind	
160-43230-10	FSS-162-082621	Total/NA	Solid	Dry and Grind	
160-43230-11	FSS-163-082621	Total/NA	Solid	Dry and Grind	
160-43230-12	FSS-164-082621	Total/NA	Solid	Dry and Grind	
160-43230-13	FSS-165-082621	Total/NA	Solid	Dry and Grind	
160-43230-14	FSS-166-082621	Total/NA	Solid	Dry and Grind	
160-43230-15	FSS-167-082621	Total/NA	Solid	Dry and Grind	
160-43230-16	FSS-168-082621	Total/NA	Solid	Dry and Grind	
160-43230-17	FSS-169-082621	Total/NA	Solid	Dry and Grind	
160-43230-18	FSS-170-082621	Total/NA	Solid	Dry and Grind	
160-43230-7 DU	FSS-159-082621	Total/NA	Solid	Dry and Grind	
160-43230-8 DU	FSS-160-082621	Total/NA	Solid	Dry and Grind	
160-43230-10 DU	FSS-162-082621	Total/NA	Solid	Dry and Grind	
160-43230-11 DU	FSS-163-082621	Total/NA	Solid	Dry and Grind	

Rad (Continued)

Leach Batch: 524348 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-18 DU	FSS-170-082621	Total/NA	Solid	Dry and Grind	

Prep Batch: 525011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-8	FSS-160-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-13	FSS-165-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-17	FSS-169-082621	Total/NA	Solid	Fill_Geo-21	524348
MB 160-525011/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525011/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43230-8 DU	FSS-160-082621	Total/NA	Solid	Fill_Geo-21	524348

Prep Batch: 525244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-2	FSS-154-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-3	FSS-155-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-4	FSS-156-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-5	FSS-157-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-6	FSS-158-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-7	FSS-159-082621	Total/NA	Solid	Fill_Geo-21	524348
MB 160-525244/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525244/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43230-7 DU	FSS-159-082621	Total/NA	Solid	Fill_Geo-21	524348

Prep Batch: 525251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-9	FSS-161-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-10	FSS-162-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-11	FSS-163-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-12	FSS-164-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-14	FSS-166-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-15	FSS-167-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-16	FSS-168-082621	Total/NA	Solid	Fill_Geo-21	524348
160-43230-18	FSS-170-082621	Total/NA	Solid	Fill_Geo-21	524348
MB 160-525251/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525251/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43230-18 DU	FSS-170-082621	Total/NA	Solid	Fill_Geo-21	524348

Prep Batch: 526442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	ExtChrom	524348
160-43230-2	FSS-154-082621	Total/NA	Solid	ExtChrom	524348
160-43230-3	FSS-155-082621	Total/NA	Solid	ExtChrom	524348
160-43230-4	FSS-156-082621	Total/NA	Solid	ExtChrom	524348
160-43230-5	FSS-157-082621	Total/NA	Solid	ExtChrom	524348
160-43230-6	FSS-158-082621	Total/NA	Solid	ExtChrom	524348
160-43230-7	FSS-159-082621	Total/NA	Solid	ExtChrom	524348
160-43230-8	FSS-160-082621	Total/NA	Solid	ExtChrom	524348
160-43230-9	FSS-161-082621	Total/NA	Solid	ExtChrom	524348
MB 160-526442/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526442/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	

Rad

Prep Batch: 526443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-10	FSS-162-082621	Total/NA	Solid	ExtChrom	524348
160-43230-11	FSS-163-082621	Total/NA	Solid	ExtChrom	524348
160-43230-12	FSS-164-082621	Total/NA	Solid	ExtChrom	524348
160-43230-13	FSS-165-082621	Total/NA	Solid	ExtChrom	524348
160-43230-14	FSS-166-082621	Total/NA	Solid	ExtChrom	524348
160-43230-15	FSS-167-082621	Total/NA	Solid	ExtChrom	524348
160-43230-16	FSS-168-082621	Total/NA	Solid	ExtChrom	524348
160-43230-17	FSS-169-082621	Total/NA	Solid	ExtChrom	524348
160-43230-18	FSS-170-082621	Total/NA	Solid	ExtChrom	524348
MB 160-526443/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526443/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43230-10 DU	FSS-162-082621	Total/NA	Solid	ExtChrom	524348

Prep Batch: 526530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-10	FSS-162-082621	Total/NA	Solid	ExtChrom	524348
160-43230-11	FSS-163-082621	Total/NA	Solid	ExtChrom	524348
160-43230-12	FSS-164-082621	Total/NA	Solid	ExtChrom	524348
160-43230-13	FSS-165-082621	Total/NA	Solid	ExtChrom	524348
160-43230-14	FSS-166-082621	Total/NA	Solid	ExtChrom	524348
160-43230-15	FSS-167-082621	Total/NA	Solid	ExtChrom	524348
160-43230-16	FSS-168-082621	Total/NA	Solid	ExtChrom	524348
160-43230-17	FSS-169-082621	Total/NA	Solid	ExtChrom	524348
160-43230-18	FSS-170-082621	Total/NA	Solid	ExtChrom	524348
MB 160-526530/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526530/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43230-10 DU	FSS-162-082621	Total/NA	Solid	ExtChrom	524348

Prep Batch: 526531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-10	FSS-162-082621	Total/NA	Solid	Leach_Precip	
160-43230-11	FSS-163-082621	Total/NA	Solid	Leach_Precip	
160-43230-12	FSS-164-082621	Total/NA	Solid	Leach_Precip	
160-43230-13	FSS-165-082621	Total/NA	Solid	Leach_Precip	
160-43230-14	FSS-166-082621	Total/NA	Solid	Leach_Precip	
160-43230-15	FSS-167-082621	Total/NA	Solid	Leach_Precip	
160-43230-16	FSS-168-082621	Total/NA	Solid	Leach_Precip	
160-43230-17	FSS-169-082621	Total/NA	Solid	Leach_Precip	
160-43230-18	FSS-170-082621	Total/NA	Solid	Leach_Precip	
MB 160-526531/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526531/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43230-10 DU	FSS-162-082621	Total/NA	Solid	Leach_Precip	

Prep Batch: 526534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	ExtChrom	524348
160-43230-2	FSS-154-082621	Total/NA	Solid	ExtChrom	524348
160-43230-3	FSS-155-082621	Total/NA	Solid	ExtChrom	524348
160-43230-4	FSS-156-082621	Total/NA	Solid	ExtChrom	524348
160-43230-5	FSS-157-082621	Total/NA	Solid	ExtChrom	524348
160-43230-6	FSS-158-082621	Total/NA	Solid	ExtChrom	524348

Rad (Continued)

Prep Batch: 526534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-7	FSS-159-082621	Total/NA	Solid	ExtChrom	524348
160-43230-8	FSS-160-082621	Total/NA	Solid	ExtChrom	524348
160-43230-9	FSS-161-082621	Total/NA	Solid	ExtChrom	524348
MB 160-526534/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526534/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43220-A-7-G DU	Duplicate	Total/NA	Solid	ExtChrom	524327

Prep Batch: 526535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	Leach_Precip	
160-43230-2	FSS-154-082621	Total/NA	Solid	Leach_Precip	
160-43230-3	FSS-155-082621	Total/NA	Solid	Leach_Precip	
160-43230-4	FSS-156-082621	Total/NA	Solid	Leach_Precip	
160-43230-5	FSS-157-082621	Total/NA	Solid	Leach_Precip	
160-43230-6	FSS-158-082621	Total/NA	Solid	Leach_Precip	
160-43230-7	FSS-159-082621	Total/NA	Solid	Leach_Precip	
160-43230-8	FSS-160-082621	Total/NA	Solid	Leach_Precip	
160-43230-9	FSS-161-082621	Total/NA	Solid	Leach_Precip	
MB 160-526535/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526535/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43220-A-7-I DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 527804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	DPS-7	524348
160-43230-2	FSS-154-082621	Total/NA	Solid	DPS-7	524348
160-43230-3	FSS-155-082621	Total/NA	Solid	DPS-7	524348
160-43230-4	FSS-156-082621	Total/NA	Solid	DPS-7	524348
160-43230-5	FSS-157-082621	Total/NA	Solid	DPS-7	524348
160-43230-6	FSS-158-082621	Total/NA	Solid	DPS-7	524348
160-43230-7	FSS-159-082621	Total/NA	Solid	DPS-7	524348
MB 160-527804/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527804/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43220-A-5-H DU	Duplicate	Total/NA	Solid	DPS-7	524327

Prep Batch: 527864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-8	FSS-160-082621	Total/NA	Solid	DPS-7	524348
160-43230-9	FSS-161-082621	Total/NA	Solid	DPS-7	524348
160-43230-10	FSS-162-082621	Total/NA	Solid	DPS-7	524348
160-43230-11	FSS-163-082621	Total/NA	Solid	DPS-7	524348
160-43230-12	FSS-164-082621	Total/NA	Solid	DPS-7	524348
160-43230-13	FSS-165-082621	Total/NA	Solid	DPS-7	524348
160-43230-14	FSS-166-082621	Total/NA	Solid	DPS-7	524348
160-43230-15	FSS-167-082621	Total/NA	Solid	DPS-7	524348
160-43230-16	FSS-168-082621	Total/NA	Solid	DPS-7	524348
160-43230-17	FSS-169-082621	Total/NA	Solid	DPS-7	524348
160-43230-18	FSS-170-082621	Total/NA	Solid	DPS-7	524348
MB 160-527864/23-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-527864/1-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43230-8 DU	FSS-160-082621	Total/NA	Solid	DPS-7	524348

Rad

Prep Batch: 528330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-2	FSS-154-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-3	FSS-155-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-4	FSS-156-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-5	FSS-157-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-6	FSS-158-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-7	FSS-159-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-8	FSS-160-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-9	FSS-161-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-12	FSS-164-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-13	FSS-165-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-14	FSS-166-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-15	FSS-167-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-16	FSS-168-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-17	FSS-169-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-18	FSS-170-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
MB 160-528330/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-528330/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43230-7 DU	FSS-159-082621	Total/NA	Solid	Ext_Chrom_LSC	524348

Prep Batch: 528889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-2	FSS-154-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-3	FSS-155-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-4	FSS-156-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-5	FSS-157-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-6	FSS-158-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-7	FSS-159-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-8	FSS-160-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-9	FSS-161-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-10	FSS-162-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-11	FSS-163-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-12	FSS-164-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-13	FSS-165-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-14	FSS-166-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-15	FSS-167-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-16	FSS-168-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-17	FSS-169-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-18	FSS-170-082621	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528889/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528889/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43230-17 MS	FSS-169-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-18 DU	FSS-170-082621	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 528936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-1	FSS-153-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-2	FSS-154-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-3	FSS-155-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-4	FSS-156-082621	Total/NA	Solid	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 528936 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-5	FSS-157-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-6	FSS-158-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-7	FSS-159-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-8	FSS-160-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-9	FSS-161-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-10	FSS-162-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-11	FSS-163-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-12	FSS-164-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-13	FSS-165-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-14	FSS-166-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-15	FSS-167-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-16	FSS-168-082621	Total/NA	Solid	LSC_Dist_Susp	
MB 160-528936/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-528936/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43230-1 MS	FSS-153-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-1 DU	FSS-153-082621	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 529126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-17	FSS-169-082621	Total/NA	Solid	LSC_Dist_Susp	
160-43230-18	FSS-170-082621	Total/NA	Solid	LSC_Dist_Susp	
MB 160-529126/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-529126/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43414-A-2-C MS	Matrix Spike	Total/NA	Solid	LSC_Dist_Susp	
160-43414-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 529474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-10	FSS-162-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
160-43230-11	FSS-163-082621	Total/NA	Solid	Ext_Chrom_LSC	524348
MB 160-529474/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-529474/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43230-11 DU	FSS-163-082621	Total/NA	Solid	Ext_Chrom_LSC	524348

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43230-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43220-A-5-H DU	Duplicate	78.9	99.4
160-43230-1	FSS-153-082621	77.2	101
160-43230-2	FSS-154-082621	83.0	102
160-43230-3	FSS-155-082621	80.4	102
160-43230-4	FSS-156-082621	76.7	102
160-43230-5	FSS-157-082621	83.4	99.8
160-43230-6	FSS-158-082621	84.6	101
160-43230-7	FSS-159-082621	79.2	97.9
160-43230-8	FSS-160-082621	77.1	96.4
160-43230-8 DU	FSS-160-082621	74.2	99.8
160-43230-9	FSS-161-082621	75.8	95.7
160-43230-10	FSS-162-082621	77.3	101
160-43230-11	FSS-163-082621	72.4	94.6
160-43230-12	FSS-164-082621	83.3	95.7
160-43230-13	FSS-165-082621	78.5	89.7
160-43230-14	FSS-166-082621	83.6	94.6
160-43230-15	FSS-167-082621	83.3	95.3
160-43230-16	FSS-168-082621	79.3	93.1
160-43230-17	FSS-169-082621	81.8	96.1
160-43230-18	FSS-170-082621	87.1	87.9
LCS 160-527804/2-A	Lab Control Sample	52.3	101
LCS 160-527864/1-A	Lab Control Sample	71.9	90.5
MB 160-527804/1-A	Method Blank	75.7	101
MB 160-527864/23-A	Method Blank	79.0	88.6

Tracer/Carrier Legend

Sr = Sr Carrier

Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43230-1	FSS-153-082621	82.1
160-43230-2	FSS-154-082621	89.8
160-43230-3	FSS-155-082621	85.7
160-43230-4	FSS-156-082621	85.3
160-43230-5	FSS-157-082621	92.2
160-43230-6	FSS-158-082621	101
160-43230-7	FSS-159-082621	103
160-43230-8	FSS-160-082621	97.6
160-43230-9	FSS-161-082621	97.7
160-43230-10	FSS-162-082621	89.0
160-43230-10 DU	FSS-162-082621	92.2
160-43230-11	FSS-163-082621	96.7
160-43230-12	FSS-164-082621	79.1
160-43230-13	FSS-165-082621	93.4
160-43230-14	FSS-166-082621	69.8

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43230-1
Project/Site: BNL Decommissioning Project

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43230-15	FSS-167-082621	79.9						
160-43230-16	FSS-168-082621	15.0 Q						
160-43230-17	FSS-169-082621	47.9						
160-43230-18	FSS-170-082621	69.6						
LCS 160-526442/2-A	Lab Control Sample	100						
LCS 160-526443/2-A	Lab Control Sample	86.1						
MB 160-526442/1-A	Method Blank	90.4						
MB 160-526443/1-A	Method Blank	91.9						

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	U-232 (30-110)						
160-43220-A-7-G DU	Duplicate	90.2						
160-43230-1	FSS-153-082621	79.2						
160-43230-2	FSS-154-082621	89.2						
160-43230-3	FSS-155-082621	82.9						
160-43230-4	FSS-156-082621	72.8						
160-43230-5	FSS-157-082621	81.4						
160-43230-6	FSS-158-082621	83.0						
160-43230-7	FSS-159-082621	80.3						
160-43230-8	FSS-160-082621	77.3						
160-43230-9	FSS-161-082621	83.3						
160-43230-10	FSS-162-082621	81.5						
160-43230-10 DU	FSS-162-082621	88.6						
160-43230-11	FSS-163-082621	88.8						
160-43230-12	FSS-164-082621	74.9						
160-43230-13	FSS-165-082621	77.2						
160-43230-14	FSS-166-082621	72.3						
160-43230-15	FSS-167-082621	91.7						
160-43230-16	FSS-168-082621	18.8 Q						
160-43230-17	FSS-169-082621	45.2						
160-43230-18	FSS-170-082621	81.2						
LCS 160-526530/2-A	Lab Control Sample	91.9						
LCS 160-526534/2-A	Lab Control Sample	82.7						
MB 160-526530/1-A	Method Blank	85.5						
MB 160-526534/1-A	Method Blank	96.9						

Tracer/Carrier Legend

U-232 = Uranium-232

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43230-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Ni (40-110)						
160-43230-1	FSS-153-082621	94.6						
160-43230-2	FSS-154-082621	91.4						
160-43230-3	FSS-155-082621	88.0						
160-43230-4	FSS-156-082621	92.0						
160-43230-5	FSS-157-082621	94.2						
160-43230-6	FSS-158-082621	97.0						
160-43230-7	FSS-159-082621	80.0						
160-43230-7 DU	FSS-159-082621	93.5						
160-43230-8	FSS-160-082621	81.9						
160-43230-9	FSS-161-082621	88.7						
160-43230-10	FSS-162-082621	72.9						
160-43230-11	FSS-163-082621	83.0						
160-43230-11 DU	FSS-163-082621	82.1						
160-43230-12	FSS-164-082621	105						
160-43230-13	FSS-165-082621	88.9						
160-43230-14	FSS-166-082621	75.5						
160-43230-15	FSS-167-082621	87.2						
160-43230-16	FSS-168-082621	92.6						
160-43230-17	FSS-169-082621	91.8						
160-43230-18	FSS-170-082621	94.1						
LCS 160-528330/2-A	Lab Control Sample	91.1						
LCS 160-529474/2-A	Lab Control Sample	74.5						
MB 160-528330/1-A	Method Blank	97.1						
MB 160-529474/1-A	Method Blank	71.4						

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)						
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)						
160-43220-A-7-I DU	Duplicate	101						
160-43230-1	FSS-153-082621	82.1						
160-43230-2	FSS-154-082621	89.8						
160-43230-3	FSS-155-082621	85.7						
160-43230-4	FSS-156-082621	85.3						
160-43230-5	FSS-157-082621	92.2						
160-43230-6	FSS-158-082621	101						
160-43230-7	FSS-159-082621	103						
160-43230-8	FSS-160-082621	97.6						
160-43230-9	FSS-161-082621	97.7						
160-43230-10	FSS-162-082621	89.0						
160-43230-10 DU	FSS-162-082621	92.2						
160-43230-11	FSS-163-082621	96.7						
160-43230-12	FSS-164-082621	79.1						
160-43230-13	FSS-165-082621	93.4						
160-43230-14	FSS-166-082621	69.8						
160-43230-15	FSS-167-082621	79.9						

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43230-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)							
160-43230-16	FSS-168-082621	1.50 Q							
160-43230-17	FSS-169-082621	47.9							
160-43230-18	FSS-170-082621	69.6							
LCS 160-526531/2-A	Lab Control Sample	86.1							
LCS 160-526535/2-A	Lab Control Sample	100							
MB 160-526531/1-A	Method Blank	91.9							
MB 160-526535/1-A	Method Blank	90.4							

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	10/12/2021
Sample Receipt Date	08/30/2021
RJ Lee Group Job No.	AOH1063332-0
Authorization/P.O. No.	
Client Job No./Name	160-43230-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546986.HPL	FSS-153-082621 (160-43230-1)	Yes	1	ND		100.00	Q, CA, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546987.HPL	FSS-154-082621 (160-43230-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546988.HPL	FSS-155-082621 (160-43230-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43230-1 RJ Lee Group Job No: AOH1063332-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546989.HPL	FSS-156-082621 (160-43230-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546990.HPL	FSS-157-082621 (160-43230-5)	Yes	1	ND		100.00	Q, CL, F, OR, OP, MI, M	AC-10/11/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546991.HPL	FSS-158-082621 (160-43230-6)	Yes	1	ND		100.00	Q, CL, F, OP, MI, M	AC-10/11/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546992.HPL	FSS-159-082621 (160-43230-7)	Yes	1	ND		100.00	Q, CA, CL, AM, F, OP, MI, M	AC-10/11/2021
Description:	Pale Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43230-1 RJ Lee Group Job No: AOH1063332-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546993.HPL	FSS-160-082621 (160-43230-8)	Yes	1	ND		100.00	Q, CA, CL, F, OR, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546994.HPL	FSS-161-082621 (160-43230-9)	Yes	1	ND		100.00	Q, CA, CL, F, OR, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546995.HPL	FSS-162-082621 (160-43230-10)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546996.HPL	FSS-163-082621 (160-43230-11)	Yes	1	ND		100.00	Q, CA, CL, F, OR, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

Client Job No./Name: 160-43230-1 RJ Lee Group Job No: AOH1063332-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10546997.HPL	FSS-164-082621 (160-43230-12)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10546998.HPL	FSS-165-082621 (160-43230-13)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10546999.HPL	FSS-166-082621 (160-43230-14)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547000.HPL	FSS-167-082621 (160-43230-15)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547001.HPL	FSS-168-082621 (160-43230-16)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43230-1 RJ Lee Group Job No: AOH1063332-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10547002.HPL	FSS-169-082621 (160-43230-17)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								
10547003.HPL	FSS-170-082621 (160-43230-18)	Yes	1	ND		100.00	Q, CA, CL, F, OP, MI, M	AC-10/11/2021
Description:	Brown Sediment Four slides scanned. No asbestos detected. NY ELAP Method 198.1							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43230-1 RJ Lee Group Job No: AOH1063332-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: _____

Alexandra Cheek, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.10
Samples FSS-171 through -080

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 160-43306-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/13/2021 4:47:25 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

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Job ID: 160-43306-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43306-1

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

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

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

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an ""as received"" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 9/3/2021 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.2º C, 2.1º C, 5.1º C and 22.6º C.

ASBESTOS

Job ID: 160-43306-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

An aliquot of the samples was forwarded to RJ LEE for asbestos analysis. Refer to the subcontract section of the report for details of this analysis.

METALS (ICP/MS)
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Metals (ICP/MS) in accordance with EPA SW-846 Method 6020 DoD5. The samples were prepared on 09/21/2021 and analyzed on 09/22/2021.

Preparation Batch 280-549628:
The samples were made up of broken up rocks and may not be completely homogenized.: FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), (160-43306-D-1 MS), and (160-43306-D-1 MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

MERCURY (CVAA)
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7471B_ DoD5. The samples were prepared on 09/23/2021 and analyzed on 09/24/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PARTICLE SIZE REDUCTION PREPARATION
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Particle Size Reduction Preparation in accordance with NONE. The samples were analyzed on 09/07/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

STRONTIUM-90 (GFPC)
Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905. The samples were leached on 09/07/2021, prepared on 09/21/2021 and analyzed on 10/11/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

STRONTIUM-90 (GFPC)
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were leached on 09/07/2021, prepared on 09/21/2021 and analyzed on 10/11/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM
Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Tritium in accordance with EPA Method 906.0. The samples were prepared on 09/29/2021 and analyzed on 10/02/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A-01-R. The samples were leached on 09/07/2021, prepared on 09/11/2021

Job ID: 160-43306-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

and analyzed on 09/22/2021.

Plutonium-238 and Plutonium-239/240 exceeded the RPD limit for the duplicate of sample 160-43230-10. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with A01-R_Pu. The samples were leached on 09/07/2021, prepared on 09/11/2021 and analyzed on 09/22/2021 and 09/23/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were leached on 09/07/2021, prepared on 09/12/2021 and analyzed on 09/23/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with A-01-R U. The samples were leached on 09/07/2021, prepared on 09/12/2021 and analyzed on 09/23/2021 and 09/24/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CARBON-14 BY LSC
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Carbon-14 by LSC in accordance with EERF C-01. The samples were prepared on 10/05/2021 and analyzed on 10/07/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM
Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Tritium in accordance with DOE. The samples were prepared on 09/29/2021 and analyzed on 10/02/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 BY GAMMA SPEC (21 DAY INGROWTH)
Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Radium-226 by gamma spec (21 day ingrowth) in accordance with EPA GA_01_R. The samples were leached on 09/07/2021, prepared on 09/09/2021 and analyzed on 10/03/2021.

Preparation Batch 160-526074:
For samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9), FSS-180-090221 (160-43306-10), (LCS 160-526074/2-A), (MB 160-526074/1-A), (410-53441-A-14-B), and (410-53441-A-14-C DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon

Job ID: 160-43306-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

Preparation Batch 160-525951:
The detection goal of 0.2 pCi/g was not met for Ra-226 for the samples. A n elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data: FSS-172-082821 (160-43306-2), FSS-177-082821 (160-43306-7), and (160-43306-A-7-D DU).

For samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), and (160-43306-A-7-D DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224

Job ID: 160-43306-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM 226 (21 DAY INGROWTH)

Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Radium 226 (21 day Ingrowth) in accordance with GA-01-R. The samples were leached on 09/07/2021, prepared on 09/08/2021 and analyzed on 10/01/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NICKEL 59/63

Samples FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Nickel 59/63 in accordance with STL-RC-0055. The samples were leached on 09/07/2021, prepared on 09/24/2021 and analyzed on 10/06/2021.

Preparation Batch 160-529541:
The method blank (MB) z-score was outside limits. The associated samples were non-detect for Ni-63, therefore, re-analysis was not required: FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9), FSS-180-090221 (160-43306-10), and (160-43306-A-7-K DU).

Nickel-63 was detected in method blank MB 160-529541/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NICKEL 59/63 (LSC)

Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6) and FSS-177-082821 (160-43306-7) were analyzed for Nickel 59/63 (LSC) in accordance with LSC-Nickel. The samples were leached on 09/07/2021, prepared on 09/24/2021 and analyzed on 10/06/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PLUTONIUM 241

Samples FSS-171-082821 (160-43306-1), FSS-172-082821 (160-43306-2), FSS-173-082821 (160-43306-3), FSS-174-082821 (160-43306-4), FSS-175-082821 (160-43306-5), FSS-176-082821 (160-43306-6), FSS-177-082821 (160-43306-7), FSS-178-090221 (160-43306-8), FSS-179-090221 (160-43306-9) and FSS-180-090221 (160-43306-10) were analyzed for Plutonium 241 in accordance with TAL-STL-RC-0245. The samples were prepared on 09/12/2021 and analyzed on 09/30/2021.

Preparation Batch 160-526531:
The samples did not meet the requested limit (RL) due to a low carrier recovery, which can be attributed to the presence of matrix interferences noted during the initial sample preparation: FSS-171-082821 (160-43306-1) and FSS-172-082821 (160-43306-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

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Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date: 09-02-21**	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier: Fed Ex**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: W. Fillingame
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-171-082821	28-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 1
FSS-172-082821	28-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 2
FSS-173-082821	28-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 05
FSS-174-082821	28-Aug	12:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 04
FSS-175-082821	28-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 03
FSS-176-082821	28-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 02
FSS-177-082821	28-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 01
FSS-178-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 0-6"
FSS-179-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 6"-12"
FSS-180-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:9-02-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: CIA SW	Date/Time: 9/3/21 0900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-43306 Chain of Custody

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218878.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD A2LA, DoD ANAB; NELAP New York		Job #: 160-43306-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/3/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A HCL M Hexane
B NaOH N None
C Zn Acetate O AsNaO2
D Nitric Acid P Na2O4S
E NaHSO4 Q Na2SO3
F MeOH R Na2S2O3
G Amchlor S H2SO4
H Ascorbic Acid T TSP Dodecahydrate
I Ice U Acetone
J DI Water V MCAA
K EDTA W pH 4-5
L EDA Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7471B_DOD5/7471B_Prep Mercury	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-171-082821 (160-43306-1)	8/28/21	09:00 Eastern		Solid			X	X	1	
FSS-172-082821 (160-43306-2)	8/28/21	10:00 Eastern		Solid			X	X	1	
FSS-173-082821 (160-43306-3)	8/28/21	11:00 Eastern		Solid			X	X	1	
FSS-174-082821 (160-43306-4)	8/28/21	12:00 Eastern		Solid			X	X	1	
FSS-175-082821 (160-43306-5)	8/28/21	13:00 Eastern		Solid			X	X	1	
FSS-176-082821 (160-43306-6)	8/28/21	13:30 Eastern		Solid			X	X	1	
FSS-177-082821 (160-43306-7)	8/28/21	14:00 Eastern		Solid			X	X	1	
FSS-178-090221 (160-43306-8)	9/2/21	11:00 Eastern		Solid			X	X	1	
FSS-179-090221 (160-43306-9)	9/2/21	11:00 Eastern		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kerninger	9/9/21 17:00	ETAST		9/10/21 1600945	ETAPEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No. NA	Cooler Temperature(s) °C and Other Remarks: 0.2 IR11 CF1.0

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania Ivan H	Carrier Tracking No(s):	COC No: 160-218878.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD A2LA, DoD ANAB; NELAP New York		Job #: 160-43306-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/3/2021	Analysis Requested		Preservation Codes:
City: Arvada	TAT Requested (days):			A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other:
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7471B_DOD5/7471B_Prep Mercury	6020B_DOD5/3050B (MOD) ICPMS Metals Pb Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-180-090221 (160-43306-10)	9/2/21	11:00 Eastern		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Level 1 radioactive	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Micha Konintzer	Date/Time:	Company	Received by:	Date/Time: 9/10/21 0945	Company EHDV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

AOH10634790

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218996.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43306-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6UB (Asbestos) Asbestos	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-171-082821 (160-43306-1)	8/28/21	09:00 Eastern		Solid			X	1	
FSS-172-082821 (160-43306-2)	8/28/21	10:00 Eastern		Solid			X	1	
FSS-173-082821 (160-43306-3)	8/28/21	11:00 Eastern		Solid			X	1	
FSS-174-082821 (160-43306-4)	8/28/21	12:00 Eastern		Solid			X	1	
FSS-175-082821 (160-43306-5)	8/28/21	13:00 Eastern		Solid			X	1	
FSS-176-082821 (160-43306-6)	8/28/21	13:30 Eastern		Solid			X	1	
FSS-177-082821 (160-43306-7)	8/28/21	14:00 Eastern		Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification *Level 1 radioactive*	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by: Micha Konrinings	Date/Time: SEP 13 2021 17:00	Company: ENA SL	Received by: Londa Maugan	Date/Time: 09-14-21 9:35Am	Company: RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

[redacted]

eurofins Environment Testing America

AOH10634790

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218879.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43306-1
Address: 350 Hochberg Rd, .	Due Date Requested: 10/4/2021			
City: Monroeville	TAT Requested (days):			
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested: SUB (Asbestos) Asbestos	Asbestos - PLM-EPA600-R-93/LAP-080.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FSS-171-082821 (160-43306-1)	8/28/21	09:00 Eastern		Solid			X		1	
FSS-172-082821 (160-43306-2)	8/28/21	10:00 Eastern		Solid			X		1	
FSS-173-082821 (160-43306-3)	8/28/21	11:00 Eastern		Solid			X		1	
FSS-174-082821 (160-43306-4)	8/28/21	12:00 Eastern		Solid			X		1	
FSS-175-082821 (160-43306-5)	8/28/21	13:00 Eastern		Solid			X		1	
FSS-176-082821 (160-43306-6)	8/28/21	13:30 Eastern		Solid			X		1	
FSS-177-082821 (160-43306-7)	8/28/21	14:00 Eastern		Solid			X		1	
FSS-178-090221 (160-43306-8)	9/2/21	11:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03
FSS-179-090221 (160-43306-9)	9/2/21	11:00 Eastern		Solid				X	1	Asbestos - PLM-EPA600-R-93/LAP-080.03

These samples 1-7 were returned to the client 09-15-21

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Level 1 radioactive	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: — Date: — Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Micha Kominsky	9/9/2021 17:00	ETA SL	Linda Mauger	09-10-2021 9:30 am	RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No — Custody Seal No.: — Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

ACHM063479-0

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218879.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 2 of 2
Company: RJ Lee Group, Inc		Accreditations Required (See note): DoD - A2LA; DoD - ANAB; NELAP - New York		Job #: 160-43308-1
Address: 350 Hochberg Rd,	Due Date Requested: 10/4/2021	Analysis Requested		Preservation Codes:
City: Monroeville	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
State, Zip: PA, 15146				
Phone:	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos) Asbestos - PLM-EPA600-R-93/LAP-090.03	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
FSS-180-090221 (160-43308-10)	9/2/21	11:00 Eastern		Solid			X	1	Asbestos - PLM-EPA600-R-93/LAP-090.03

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification *Level 1 radioactive*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by: Micha Kominsky	Date/Time: 9/9/2021 17:00	Company: EDA SR	Received by: Linda Mauge	Date/Time: 09-10-2021 9:30 AM	Company: RJ Lee Group
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43306-1

Login Number: 43306
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43306-1

Login Number: 43306
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 09/10/21 07:58 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43306-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
H3-04-RC	Tritium (LSC)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
PLM	Asbestos in Soils	EPA-01	RJLee-SRO
PLM	Asbestos USEPA 600/R-93/116 (visual)	EPA	RJLee-SRO
Part Size Red	Particle Size Reduction Preparation	None	TAL SL
3050B	Preparation, Metals	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
DPS-7	Preparation, Digestion/Precipitate Separation (7-Day In-Growth)	None	TAL SL
Dry and Grind	Preparation, Dry and Grind	None	TAL SL
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL
Pulverize	Pulverize	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
EPA-01 = "Methods For The Determination Of Nonconventional Pesticides In Municipal And Industrial Wastewater", EPA/821/R/92/002, April 1992.
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

RJLee-SRO = RJ Lee Group - SRO, 350 Hochberg Rd, Monroeville, PA 15146
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43306-1	FSS-171-082821	Solid	08/28/21 09:00	09/03/21 09:00
160-43306-2	FSS-172-082821	Solid	08/28/21 10:00	09/03/21 09:00
160-43306-3	FSS-173-082821	Solid	08/28/21 11:00	09/03/21 09:00
160-43306-4	FSS-174-082821	Solid	08/28/21 12:00	09/03/21 09:00
160-43306-5	FSS-175-082821	Solid	08/28/21 13:00	09/03/21 09:00
160-43306-6	FSS-176-082821	Solid	08/28/21 13:30	09/03/21 09:00
160-43306-7	FSS-177-082821	Solid	08/28/21 14:00	09/03/21 09:00
160-43306-8	FSS-178-090221	Solid	09/02/21 11:00	09/03/21 09:00
160-43306-9	FSS-179-090221	Solid	09/02/21 11:00	09/03/21 09:00
160-43306-10	FSS-180-090221	Solid	09/02/21 11:00	09/03/21 09:00

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Client Sample ID: FSS-171-082821

Date Collected: 08/28/21 09:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-1

Matrix: Solid

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**4.4**		0.28	0.017	mg/Kg		09/21/21 14:59	09/22/21 09:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	20	6.4	ug/Kg		09/23/21 18:50	09/24/21 16:05	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**7.52**		0.554	0.819	3.00	0.342	pCi/g	09/21/21 15:03	10/11/21 17:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*84.1*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:17*	*1*
Y Carrier	*86.0*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:17*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0647	U	0.0328	0.0332	1.00	0.0907	pCi/g	09/11/21 15:09	09/23/21 10:32	1
Plutonium-239/240	-0.0691	U	0.0379	0.0383	1.00	0.0983	pCi/g	09/11/21 15:09	09/23/21 10:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*42.4*		*30 - 110*	*09/11/21 15:09*	*09/23/21 10:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0175	U	0.0343	0.0343	1.00	0.0525	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.309**		0.129	0.132	1.00	0.0421	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*49.3*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.16	U	0.956	0.964	5.00	1.57	pCi/g	10/05/21 14:19	10/07/21 12:12	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.111	U	0.246	0.246		0.418	pCi/g	09/08/21 13:08	10/01/21 07:27	1
Cesium-137	**4.05**		0.232	0.474		0.0256	pCi/g	09/08/21 13:08	10/01/21 07:27	1
Cobalt-60	0.0118	U	0.0206	0.0206		0.0937	pCi/g	09/08/21 13:08	10/01/21 07:27	1
Europium-152	0.0140	U	0.0239	0.0240		0.250	pCi/g	09/08/21 13:08	10/01/21 07:27	1
Europium-154	0.0801	U	0.122	0.122		0.155	pCi/g	09/08/21 13:08	10/01/21 07:27	1
Europium-155	-0.117	U	0.249	0.250		0.425	pCi/g	09/08/21 13:08	10/01/21 07:27	1

Client Sample ID: FSS-171-082821

Lab Sample ID: 160-43306-1
Matrix: Solid
Date Collected: 08/28/21 09:00
Date Received: 09/03/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.532		0.163	0.171	0.200	0.156	pCi/g	09/08/21 13:08	10/01/21 07:27	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.492*		*0.181*	*0.187*		*0.190*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*
Bi-214	*0.532*		*0.163*	*0.171*		*0.156*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*
K-40	*12.0*		*1.59*	*2.00*		*0.785*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*
Pb-212	*0.512*		*0.111*	*0.129*		*0.137*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*
Pb-214	*0.563*		*0.139*	*0.151*		*0.174*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*
Tl-208	*0.179*		*0.0764*	*0.0786*		*0.0716*	*pCi/g*	*09/08/21 13:08*	*10/01/21 07:27*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	41.2		1.37	3.81	1.00	0.359	pCi/g	09/29/21 16:36	10/02/21 02:18	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.01	U	0.947	0.953	5.00	1.62	pCi/g	09/24/21 15:55	10/06/21 12:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*88.7*		*40 - 110*	*09/24/21 15:55*	*10/06/21 12:43*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.384	U	3.17	3.17	5.00	5.70	pCi/g	09/12/21 17:38	09/30/21 17:52	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*42.4*		*30 - 110*	*09/12/21 17:38*	*09/30/21 17:52*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			09/07/21 15:01	1

Client Sample ID: FSS-172-082821

Lab Sample ID: 160-43306-2
Matrix: Solid
Date Collected: 08/28/21 10:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	4.1		0.27	0.016	mg/Kg		09/21/21 14:59	09/22/21 10:00	1

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Client Sample ID: FSS-172-082821

Date Collected: 08/28/21 10:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-2

Matrix: Solid

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.0	ug/Kg		09/23/21 18:50	09/24/21 16:08	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.527**		0.253	0.257	3.00	0.380	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*71.0*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*
Y Carrier	*94.6*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00953	U	0.0132	0.0132	1.00	0.0456	pCi/g	09/11/21 15:09	09/23/21 10:32	1
Plutonium-239/240	-0.00954	U	0.0132	0.0132	1.00	0.0457	pCi/g	09/11/21 15:09	09/23/21 10:32	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*37.1*		*30 - 110*	*09/11/21 15:09*	*09/23/21 10:32*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0166	U	0.0325	0.0325	1.00	0.0498	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	**0.333**		0.130	0.133	1.00	0.0399	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*52.4*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.818	U	0.913	0.917	5.00	1.53	pCi/g	10/05/21 14:19	10/07/21 13:19	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0450	U	0.188	0.188		0.326	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Cesium-137	0.0250	U	0.0581	0.0581		0.104	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Cobalt-60	0.0344	U	0.0301	0.0303		0.0506	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-152	0.117	U	0.231	0.231		0.213	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-154	0.0533	U	0.0885	0.0887		0.158	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-155	-0.137	U	0.477	0.477		0.814	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Radium-226	0.212	U	0.107	0.109	0.200	0.385	pCi/g	09/08/21 13:08	10/01/21 07:29	1

Client Sample ID: FSS-172-082821

Lab Sample ID: 160-43306-2
Matrix: Solid
Date Collected: 08/28/21 10:00
Date Received: 09/03/21 09:00

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
K-40	8.10		2.02	2.17		1.56	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Pb-212	0.623		0.130	0.145		0.144	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Pb-214	0.446		0.124	0.131		0.171	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Tl-208	0.236		0.0697	0.0735		0.0468	pCi/g	09/08/21 13:08	10/01/21 07:29	1

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	37.6		1.30	3.49	1.00	0.355	pCi/g	09/29/21 16:36	10/02/21 02:40	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.667	U	0.909	0.912	5.00	1.58	pCi/g	09/24/21 15:55	10/06/21 13:52	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	91.6		40 - 110	09/24/21 15:55	10/06/21 13:52	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.813	U	3.38	3.38	5.00	6.19	pCi/g	09/12/21 17:38	09/30/21 18:25	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	37.1		30 - 110	09/12/21 17:38	09/30/21 18:25	1

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			09/07/21 15:01	1

Client Sample ID: FSS-173-082821

Lab Sample ID: 160-43306-3
Matrix: Solid
Date Collected: 08/28/21 11:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.2		0.27	0.016	mg/Kg		09/21/21 14:59	09/22/21 10:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg		09/23/21 18:50	09/24/21 16:15	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	2.91		0.372	0.439	3.00	0.327	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Client Sample ID: FSS-173-082821

Date Collected: 08/28/21 11:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-3

Matrix: Solid

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	83.1		40 - 110	09/21/21 15:03	10/11/21 17:18	1
Y Carrier	86.4		40 - 110	09/21/21 15:03	10/11/21 17:18	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0178	U	0.0412	0.0413	1.00	0.0880	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.00712	U	0.0296	0.0296	1.00	0.0798	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	50.9		30 - 110	09/11/21 15:09	09/22/21 22:28	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0326	U	0.0452	0.0453	1.00	0.0730	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.220**		0.0994	0.101	1.00	0.0858	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	66.3		30 - 110	09/12/21 17:35	09/23/21 20:09	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	1.19	U	0.918	0.927	5.00	1.50	pCi/g	10/05/21 14:19	10/07/21 13:42	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0877	U	0.221	0.221		0.378	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Cesium-137	**0.697**		0.108	0.129		0.0447	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Cobalt-60	0.0150	U	0.0391	0.0392		0.0811	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-152	0.0722	U	0.0963	0.0966		0.219	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-154	0.0251	U	0.129	0.130		0.151	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Europium-155	-0.000671	U	0.166	0.166		0.465	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Radium-226	**0.277**		0.135	0.138	0.200	0.154	pCi/g	09/08/21 13:08	10/01/21 07:29	1

Other Detected Radionuclides	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
K-40	6.14		1.41	1.54		1.17	pCi/g	09/08/21 13:08	10/01/21 07:29	1
Pb-212	0.308		0.130	0.135		0.150	pCi/g	09/08/21 13:08	10/01/21 07:29	1

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**38.1**		1.34	3.55	1.00	0.372	pCi/g	09/29/21 16:36	10/02/21 03:03	1

Client Sample ID: FSS-173-082821

Lab Sample ID: 160-43306-3
Matrix: Solid
Date Collected: 08/28/21 11:00
Date Received: 09/03/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.485	U	0.859	0.861	5.00	1.50	pCi/g	09/24/21 15:55	10/06/21 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*91.7*		*40 - 110*	*09/24/21 15:55*	*10/06/21 14:59*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.273	U	2.55	2.55	5.00	4.54	pCi/g	09/12/21 17:38	09/30/21 18:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*50.9*		*30 - 110*	*09/12/21 17:38*	*09/30/21 18:59*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			09/07/21 15:01	1

Client Sample ID: FSS-174-082821

Lab Sample ID: 160-43306-4
Matrix: Solid
Date Collected: 08/28/21 12:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.7**		0.27	0.016	mg/Kg		09/21/21 14:59	09/22/21 10:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	17	5.6	ug/Kg		09/23/21 18:50	09/24/21 16:18	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.372	U	0.285	0.286	3.00	0.461	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*64.5*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*
Y Carrier	*92.0*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0229	U	0.0344	0.0344	1.00	0.101	pCi/g	09/11/21 15:09	09/23/21 20:05	1
Plutonium-239/240	0.0104	U	0.0266	0.0267	1.00	0.0583	pCi/g	09/11/21 15:09	09/23/21 20:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*48.1*		*30 - 110*	*09/11/21 15:09*	*09/23/21 20:05*	*1*

Client Sample ID: FSS-174-082821

Date Collected: 08/28/21 12:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-4

Matrix: Solid

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.00935	U	0.0252	0.0252	1.00	0.0603	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.222**		0.0944	0.0961	1.00	0.0618	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*68.2*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:09*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.626	U	0.724	0.727	5.00	1.22	pCi/g	10/05/21 14:19	10/07/21 14:05	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0195	U	0.181	0.181		0.313	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Cesium-137	0.00207	U	0.0604	0.0604		0.110	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Cobalt-60	0.00701	U	0.0414	0.0414		0.0900	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-152	0.133	U	0.270	0.271		0.369	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-154	0.0289	U	0.0582	0.0583		0.111	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-155	-0.00229	U	0.00543	0.00544		0.521	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Radium-226	**0.410**		0.117	0.124	0.200	0.120	pCi/g	09/08/21 13:08	10/01/21 08:01	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.507*		*0.154*	*0.162*		*0.171*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Bi-214	*0.410*		*0.117*	*0.124*		*0.120*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
K-40	*11.1*		*1.50*	*1.87*		*0.754*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Pb-212	*0.409*		*0.0865*	*0.101*		*0.0916*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Pb-214	*0.691*		*0.137*	*0.154*		*0.125*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Tl-208	*0.172*		*0.0532*	*0.0560*		*0.0451*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**0.513**		0.248	0.252	1.00	0.365	pCi/g	09/29/21 16:36	10/02/21 03:25	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.12	U	1.07	1.08	5.00	1.85	pCi/g	09/24/21 15:55	10/06/21 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*81.9*		*40 - 110*	*09/24/21 15:55*	*10/06/21 16:06*	*1*

Client Sample ID: FSS-174-082821

Lab Sample ID: 160-43306-4
Matrix: Solid
Date Collected: 08/28/21 12:00
Date Received: 09/03/21 09:00

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.911	U	2.57	2.57	5.00	4.70	pCi/g	09/12/21 17:38	09/30/21 19:33	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*48.1*		*30 - 110*	*09/12/21 17:38*	*09/30/21 19:33*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			09/07/21 15:01	1

Client Sample ID: FSS-175-082821

Lab Sample ID: 160-43306-5
Matrix: Solid
Date Collected: 08/28/21 13:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**2.9**		0.27	0.016	mg/Kg		09/21/21 14:59	09/22/21 10:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.9	ug/Kg		09/23/21 18:50	09/24/21 16:20	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0513	U	0.193	0.193	3.00	0.347	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*80.7*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*
Y Carrier	*82.6*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.0134	U	0.0463	0.0463	1.00	0.114	pCi/g	09/11/21 15:09	09/23/21 20:05	1
Plutonium-239/240	-0.0118	U	0.0134	0.0134	1.00	0.0697	pCi/g	09/11/21 15:09	09/23/21 20:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*47.0*		*30 - 110*	*09/11/21 15:09*	*09/23/21 20:05*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	-0.00381	U	0.00746	0.00746	1.00	0.0737	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.180**		0.0929	0.0940	1.00	0.0591	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*54.6*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:09*	*1*

Client Sample ID: FSS-175-082821

Date Collected: 08/28/21 13:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-5

Matrix: Solid

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.753	U	0.796	0.800	5.00	1.33	pCi/g	10/05/21 14:19	10/07/21 14:27	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0454	U	0.193	0.193		0.335	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Cesium-137	-0.00328	U	0.0829	0.0829		0.152	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Cobalt-60	0.0238	U	0.0731	0.0731		0.0967	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-152	0.0565	U	0.0849	0.0851		0.222	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-154	0.0477	U	0.111	0.112		0.192	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Europium-155	0.0845	U	0.208	0.208		0.772	pCi/g	09/08/21 13:08	10/01/21 08:01	1
Radium-226	**0.562**		0.175	0.184	0.200	0.171	pCi/g	09/08/21 13:08	10/01/21 08:01	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Bi-214	*0.562*		*0.175*	*0.184*		*0.171*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
K-40	*14.3*		*1.97*	*2.42*		*0.520*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Pb-212	*0.540*		*0.119*	*0.132*		*0.127*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*
Pb-214	*0.592*		*0.149*	*0.160*		*0.171*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:01*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**0.870**		0.272	0.282	1.00	0.349	pCi/g	09/29/21 16:36	10/02/21 03:48	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.510	U	0.919	0.921	5.00	1.62	pCi/g	09/24/21 15:55	10/06/21 17:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*93.3*		*40 - 110*	*09/24/21 15:55*	*10/06/21 17:13*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.65	U	2.47	2.48	5.00	4.82	pCi/g	09/12/21 17:38	09/30/21 20:06	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*47.0*		*30 - 110*	*09/12/21 17:38*	*09/30/21 20:06*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			09/07/21 15:01	1

Client Sample ID: FSS-176-082821

Date Collected: 08/28/21 13:30
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-6

Matrix: Solid

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**4.8**		0.28	0.017	mg/Kg		09/21/21 14:59	09/22/21 10:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	15	U	19	6.3	ug/Kg		09/23/21 18:50	09/24/21 16:23	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.147	U	0.273	0.273	3.00	0.475	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*69.0*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*
Y Carrier	*69.5*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0211	U	0.0401	0.0402	1.00	0.0786	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	-0.0176	U	0.0154	0.0155	1.00	0.100	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*45.8*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	0.0132	U	0.0204	0.0204	1.00	0.0364	pCi/g	09/12/21 17:35	09/24/21 20:56	1
Uranium-238	**0.232**		0.0490	0.0526	1.00	0.0202	pCi/g	09/12/21 17:35	09/24/21 20:56	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*61.2*		*30 - 110*	*09/12/21 17:35*	*09/24/21 20:56*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.870	U	0.919	0.924	5.00	1.54	pCi/g	10/05/21 14:19	10/07/21 14:50	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0102	U	0.166	0.166		0.289	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Cesium-137	-0.0529	U	0.0797	0.0799		0.136	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Cobalt-60	**0.0569**		0.0322	0.0327		0.0350	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-152	0.0924	U	0.125	0.125		0.196	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-154	0.0928	U	0.146	0.147		0.120	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-155	0.000	U	0.0618	0.0618		0.334	pCi/g	09/08/21 13:08	10/01/21 08:02	1

Client Sample ID: FSS-176-082821

Lab Sample ID: 160-43306-6
Matrix: Solid
Date Collected: 08/28/21 13:30
Date Received: 09/03/21 09:00

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.443**		0.126	0.134	0.200	0.0892	pCi/g	09/08/21 13:08	10/01/21 08:02	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Ac-228	*0.448*		*0.145*	*0.151*		*0.0893*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*
Bi-214	*0.443*		*0.126*	*0.134*		*0.0892*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*
K-40	*10.8*		*1.41*	*1.78*		*0.353*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*
Pb-212	*0.483*		*0.0857*	*0.105*		*0.0769*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*
Pb-214	*0.555*		*0.119*	*0.132*		*0.0721*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**3.92**		0.463	0.573	1.00	0.362	pCi/g	09/29/21 16:36	10/02/21 04:11	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.540	U	0.826	0.828	5.00	1.42	pCi/g	09/24/21 15:55	10/06/21 18:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*97.8*		*40 - 110*	*09/24/21 15:55*	*10/06/21 18:20*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.751	U	2.62	2.62	5.00	4.82	pCi/g	09/12/21 17:38	09/30/21 20:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*45.8*		*30 - 110*	*09/12/21 17:38*	*09/30/21 20:40*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	**1.0**				NONE			09/07/21 15:01	1

Client Sample ID: FSS-177-082821

Lab Sample ID: 160-43306-7
Matrix: Solid
Date Collected: 08/28/21 14:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**3.4**		0.29	0.018	mg/Kg		09/21/21 14:59	09/22/21 10:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	U	18	5.8	ug/Kg		09/23/21 18:50	09/24/21 16:25	1

Client Sample ID: FSS-177-082821

Date Collected: 08/28/21 14:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-7

Matrix: Solid

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.0317	U	0.231	0.231	3.00	0.424	pCi/g	09/21/21 15:03	10/11/21 17:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*70.9*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*
Y Carrier	*91.2*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:18*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00305	U	0.0376	0.0376	1.00	0.0929	pCi/g	09/11/21 15:09	09/23/21 20:05	1
Plutonium-239/240	0.0145	U	0.0265	0.0265	1.00	0.0506	pCi/g	09/11/21 15:09	09/23/21 20:05	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*50.5*		*30 - 110*	*09/11/21 15:09*	*09/23/21 20:05*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-235	**0.0523**		0.0592	0.0594	1.00	0.0523	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.234**		0.113	0.115	1.00	0.0677	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*45.5*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:09*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.711	U	0.861	0.864	5.00	1.45	pCi/g	10/05/21 14:19	10/07/21 15:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0685	U	0.156	0.156		0.269	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Cesium-137	-0.0490	U	0.0814	0.0816		0.140	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Cobalt-60	0.0141	U	0.0143	0.0144		0.0481	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-152	0.141	U	0.193	0.194		0.201	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-154	0.0593	U	0.104	0.104		0.145	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Europium-155	0.0397	U	0.108	0.109		0.387	pCi/g	09/08/21 13:08	10/01/21 08:02	1
Radium-226	0.102	U	0.0899	0.0905	0.200	0.380	pCi/g	09/08/21 13:08	10/01/21 08:02	1

Other Detected Radionuclides	*Result*	*Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
K-40	*2.76*		*0.988*	*1.03*		*1.04*	*pCi/g*	*09/08/21 13:08*	*10/01/21 08:02*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Client Sample ID: FSS-177-082821

Lab Sample ID: 160-43306-7
Matrix: Solid
Date Collected: 08/28/21 14:00
Date Received: 09/03/21 09:00

Method: H3-04-RC - Tritium (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	149		2.64	13.1	1.00	0.372	pCi/g	09/29/21 16:36	10/02/21 04:33	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.387	U	0.904	0.905	5.00	1.61	pCi/g	09/24/21 15:55	10/06/21 19:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*94.0*		*40 - 110*	*09/24/21 15:55*	*10/06/21 19:27*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.151	U	2.40	2.40	5.00	4.34	pCi/g	09/12/21 17:38	09/30/21 21:13	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*50.5*		*30 - 110*	*09/12/21 17:38*	*09/30/21 21:13*	*1*

Method: Part Size Red - Particle Size Reduction Preparation

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
PSR sample generated	1.0				NONE			09/07/21 15:01	1

Client Sample ID: FSS-178-090221

Lab Sample ID: 160-43306-8
Matrix: Solid
Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	18		0.26	0.016	mg/Kg		09/21/21 14:59	09/22/21 10:28	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	51		18	5.9	ug/Kg		09/23/21 18:50	09/24/21 16:28	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.283	U	0.253	0.254	3.00	0.416	pCi/g	09/21/21 15:03	10/11/21 17:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*77.9*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*
Y Carrier	*86.7*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*

Client Sample ID: FSS-178-090221

Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-8

Matrix: Solid

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.00590	U	0.236	0.236	1.00	0.435	pCi/g	09/29/21 18:38	10/02/21 14:28	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0136	U	0.0394	0.0394	1.00	0.0853	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	-0.00271	U	0.00532	0.00532	1.00	0.0525	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*60.0*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.370**		0.128	0.132	1.00	0.103	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-235	0.0286	U	0.0445	0.0445	1.00	0.0786	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.548**		0.147	0.154	1.00	0.0493	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*63.3*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:09*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.686	U	0.822	0.826	5.00	1.38	pCi/g	10/05/21 14:19	10/07/21 15:35	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.698**		0.223	0.234		0.161	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Bismuth-212	-0.312	U	0.920	0.920		1.62	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Bismuth-214	**0.590**		0.168	0.178		0.164	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Lead-212	**0.681**		0.118	0.137		0.128	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Lead-214	**0.640**		0.163	0.175		0.157	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Potassium-40	**5.93**		1.10	1.24		0.390	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Radium-226	**0.590**		0.168	0.178	1.00	0.164	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Thorium-232	**0.698**		0.223	0.234		0.161	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Americium-241	-0.0941	U	0.223	0.223		0.380	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Cesium-137	**0.291**		0.0819	0.0869		0.0615	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Cobalt-60	0.0123	U	0.0596	0.0596		0.0725	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Europium-152	0.0858	U	0.159	0.160		0.226	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Europium-154	0.108	U	0.137	0.137		0.155	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Europium-155	-0.124	U	0.411	0.411		0.699	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Sodium-22	0.0271	U	0.0406	0.0407		0.0701	pCi/g	09/09/21 10:24	10/03/21 13:50	1
Zinc-65	-0.0440	U	0.184	0.184		0.326	pCi/g	09/09/21 10:24	10/03/21 13:50	1

Client Sample ID: FSS-178-090221

Lab Sample ID: 160-43306-8
Date Collected: 09/02/21 11:00
Matrix: Solid
Date Received: 09/03/21 09:00

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.762	U	0.944	0.947	5.00	1.63	pCi/g	09/24/21 15:55	10/06/21 21:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*85.0*		*40 - 110*	*09/24/21 15:55*	*10/06/21 21:41*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.01	U	1.92	1.92	5.00	3.57	pCi/g	09/12/21 17:38	09/30/21 21:47	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*60.0*		*30 - 110*	*09/12/21 17:38*	*09/30/21 21:47*	*1*

Client Sample ID: FSS-179-090221

Lab Sample ID: 160-43306-9
Date Collected: 09/02/21 11:00
Matrix: Solid
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	12		0.25	0.015	mg/Kg		09/21/21 14:59	09/22/21 10:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	53		18	5.7	ug/Kg		09/23/21 18:50	09/24/21 16:31	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.305		0.188	0.190	3.00	0.294	pCi/g	09/21/21 15:03	10/11/21 17:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*87.7*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*
Y Carrier	*91.6*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.195	U	0.212	0.212	1.00	0.420	pCi/g	09/29/21 18:38	10/02/21 14:51	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.000	U	0.0227	0.0227	1.00	0.0692	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.0389	U	0.0410	0.0411	1.00	0.0502	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Client Sample ID: FSS-179-090221

Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-9

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	67.4		30 - 110	09/11/21 15:09	09/22/21 22:28	1

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.474**		0.135	0.141	1.00	0.0608	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-235	0.0336	U	0.0419	0.0420	1.00	0.0592	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.485**		0.136	0.142	1.00	0.0549	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	68.6		30 - 110	09/12/21 17:35	09/23/21 20:09	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.896	U	0.941	0.946	5.00	1.57	pCi/g	10/05/21 14:19	10/07/21 15:58	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.950**		0.158	0.184		0.0707	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Bismuth-212	0.391	U	0.696	0.697		1.20	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Bismuth-214	**0.582**		0.122	0.136		0.0974	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Lead-212	**0.723**		0.0932	0.131		0.0811	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Lead-214	**0.562**		0.108	0.122		0.0821	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Potassium-40	**7.34**		1.03	1.27		0.279	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Radium-226	**0.582**		0.122	0.136	1.00	0.0974	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Thorium-232	**0.950**		0.158	0.184		0.0707	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Americium-241	-0.0252	U	0.155	0.155		0.204	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Cesium-137	**0.141**		0.0530	0.0549		0.0440	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Cobalt-60	0.00684	U	0.0297	0.0297		0.0518	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Europium-152	0.151	U	0.164	0.164		0.161	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Europium-154	0.0536	U	0.130	0.130		0.105	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Europium-155	-0.0966	U	0.407	0.407		0.691	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Sodium-22	**0.0290**		0.0201	0.0203		0.0267	pCi/g	09/09/21 10:24	10/03/21 13:51	1
Zinc-65	0.000	U	0.0309	0.0309		0.229	pCi/g	09/09/21 10:24	10/03/21 13:51	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.170	U	0.859	0.859	5.00	1.53	pCi/g	09/24/21 15:55	10/06/21 22:47	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	93.6		40 - 110	09/24/21 15:55	10/06/21 22:47	1

Client Sample ID: FSS-179-090221

Lab Sample ID: 160-43306-9
Matrix: Solid
Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-1.06	U	1.79	1.80	5.00	3.37	pCi/g	09/12/21 17:38	09/30/21 22:20	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*67.4*		*30 - 110*	*09/12/21 17:38*	*09/30/21 22:20*	*1*

Client Sample ID: FSS-180-090221

Lab Sample ID: 160-43306-10
Matrix: Solid
Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**5.5**		0.28	0.017	mg/Kg		09/21/21 14:59	09/22/21 10:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**11**	**J**	19	6.3	ug/Kg		09/23/21 18:50	09/24/21 16:33	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	**0.429**		0.224	0.226	3.00	0.340	pCi/g	09/21/21 15:03	10/11/21 17:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*83.4*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:20*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-0.0694	U	0.234	0.234	1.00	0.444	pCi/g	09/29/21 18:38	10/02/21 15:14	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00759	U	0.0238	0.0238	1.00	0.0796	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.00760	U	0.0205	0.0205	1.00	0.0490	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*68.3*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	**0.252**		0.100	0.102	1.00	0.0874	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-235	0.0254	U	0.0395	0.0396	1.00	0.0699	pCi/g	09/12/21 17:35	09/23/21 20:09	1
Uranium-238	**0.211**		0.0896	0.0912	1.00	0.0713	pCi/g	09/12/21 17:35	09/23/21 20:09	1

Client Sample ID: FSS-180-090221

Date Collected: 09/02/21 11:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43306-10

Matrix: Solid

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Uranium-232	71.4		30 - 110	09/12/21 17:35	09/23/21 20:09	1

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.382	U	0.668	0.669	5.00	1.14	pCi/g	10/05/21 14:19	10/07/21 16:20	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	**0.349**		0.135	0.140		0.276	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Bismuth-212	0.238	U	0.460	0.461		0.806	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Bismuth-214	**0.293**		0.0923	0.0970		0.0928	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Lead-212	**0.333**		0.0754	0.0864		0.0879	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Lead-214	**0.305**		0.0884	0.0937		0.109	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Potassium-40	**3.61**		0.813	0.890		0.637	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Radium-226	**0.293**		0.0923	0.0970	1.00	0.0928	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Thorium-232	**0.349**		0.135	0.140		0.276	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Americium-241	-0.0195	U	0.137	0.137		0.238	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Cesium-137	-0.0354	U	0.0573	0.0574		0.0982	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Cobalt-60	-0.00655	U	0.0458	0.0458		0.0549	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Europium-152	0.0554	U	0.147	0.147		0.154	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Europium-154	0.0727	U	0.0773	0.0777		0.100	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Europium-155	0.00744	U	0.0827	0.0827		0.276	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Sodium-22	0.0103	U	0.0276	0.0276		0.0519	pCi/g	09/09/21 10:24	10/03/21 13:52	1
Zinc-65	-0.0370	U	0.137	0.137		0.243	pCi/g	09/09/21 10:24	10/03/21 13:52	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.853	U	0.945	0.949	5.00	1.66	pCi/g	09/24/21 15:55	10/06/21 23:54	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ni	90.4		40 - 110	09/24/21 15:55	10/06/21 23:54	1

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.716	U	1.78	1.78	5.00	3.28	pCi/g	09/12/21 17:38	09/30/21 22:54	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	68.3		30 - 110	09/12/21 17:38	09/30/21 22:54	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-549628/1-A
Matrix: Solid
Analysis Batch: 550758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549628

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.070	U	0.30	0.018	mg/Kg		09/21/21 14:59	09/22/21 09:36	1

Lab Sample ID: LCS 280-549628/2-A
Matrix: Solid
Analysis Batch: 550758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	20.0	18.3		mg/Kg		92	84 - 118

Lab Sample ID: 160-43306-1 MS
Matrix: Solid
Analysis Batch: 550758

Client Sample ID: FSS-171-082821
Prep Type: Total/NA
Prep Batch: 549628

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	4.4		18.3	20.4		mg/Kg		87	84 - 118

Lab Sample ID: 160-43306-1 MSD
Matrix: Solid
Analysis Batch: 550758

Client Sample ID: FSS-171-082821
Prep Type: Total/NA
Prep Batch: 549628

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	4.4		18.7	21.1		mg/Kg		89	84 - 118	3	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-550516/1-A
Matrix: Solid
Analysis Batch: 551172

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550516

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	13	U	17	5.5	ug/Kg		09/23/21 18:50	09/24/21 16:36	1

Lab Sample ID: LCS 280-550516/2-A
Matrix: Solid
Analysis Batch: 551172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550516

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	333	362		ug/Kg		109	80 - 124

Lab Sample ID: LCSD 280-550516/3-A
Matrix: Solid
Analysis Batch: 551172

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 550516

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	333	360		ug/Kg		108	80 - 124	1	20

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: 280-153122-A-1-O MS
Matrix: Solid
Analysis Batch: 551172

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 550516

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	23		339	377		ug/Kg		105	80 - 124		

Lab Sample ID: 280-153122-A-1-P MSD
Matrix: Solid
Analysis Batch: 551172

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 550516

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	23		370	419		ug/Kg		107	80 - 124	10	20

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-528280/1-A
Matrix: Solid
Analysis Batch: 530651

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528280

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1897	U	0.260	0.260	3.00	0.442	pCi/g	09/21/21 15:03	10/11/21 17:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*73.2*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:14*	*1*
Y Carrier	*82.6*		*40 - 110*	*09/21/21 15:03*	*10/11/21 17:14*	*1*

Lab Sample ID: LCS 160-528280/2-A
Matrix: Solid
Analysis Batch: 530651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528280

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	6.878		0.792	3.00	0.363	pCi/g	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*72.9*		*40 - 110*
Y Carrier	*89.3*		*40 - 110*

Lab Sample ID: 160-43280-A-26-F DU
Matrix: Solid
Analysis Batch: 530651

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 528280

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Strontium-90	0.562			0.03931	U	0.325	3.00	0.589	pCi/g			2.32	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Sr Carrier	*45.5*		*40 - 110*
Y Carrier	*91.2*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-529492/1-A
Matrix: Solid
Analysis Batch: 529900

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529492

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.05405	U	0.238	0.238	1.00	0.426	pCi/g	09/29/21 18:38	10/02/21 13:43	1

Lab Sample ID: LCS 160-529492/2-A
Matrix: Solid
Analysis Batch: 529900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529492

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.59	6.859		0.815	1.00	0.394	pCi/g	90	79 - 125		

Lab Sample ID: 160-43306-8 MS
Matrix: Solid
Analysis Batch: 529900

Client Sample ID: FSS-178-090221
Prep Type: Total/NA
Prep Batch: 529492

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-0.00590	U	7.55	6.816		0.838	1.00	0.442	pCi/g	90	78 - 122		

Lab Sample ID: 160-43306-10 DU
Matrix: Solid
Analysis Batch: 529900

Client Sample ID: FSS-180-090221
Prep Type: Total/NA
Prep Batch: 529492

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-0.0694	U		-0.02971	U	0.231	1.00	0.426	pCi/g			0.24	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526530/1-A
Matrix: Solid
Analysis Batch: 528536

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526530

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	-0.008128	U	0.00797	0.00799	1.00	0.0543	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-235	0.02023	U	0.0357	0.0358	1.00	0.0675	pCi/g	09/12/21 17:35	09/23/21 20:11	1
Uranium-238	0.02028	U	0.0281	0.0282	1.00	0.0454	pCi/g	09/12/21 17:35	09/23/21 20:11	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*85.5*		*30 - 110*	*09/12/21 17:35*	*09/23/21 20:11*	*1*

Lab Sample ID: LCS 160-526530/2-A
Matrix: Solid
Analysis Batch: 528538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526530

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			6.37	6.237		0.681	1.00	0.0468	pCi/g	98	76 - 117		

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCS 160-526530/2-A
Matrix: Solid
Analysis Batch: 528538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526530

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-238			6.51	6.413		0.696	1.00	0.0250	pCi/g	98	78 - 118		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*91.9*		*30 - 110*

Lab Sample ID: 160-43230-A-10-G DU
Matrix: Solid
Analysis Batch: 528539

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526530

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	0.142			0.2822		0.103	1.00	0.0559	pCi/g			2.17	3
Uranium-235	0.000	U		0.005618	U	0.0234	1.00	0.0629	pCi/g			0.46	3
Uranium-238	0.228			0.3154		0.108	1.00	0.0270	pCi/g			1.23	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*88.6*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526443/1-A
Matrix: Solid
Analysis Batch: 528357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526443

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.004267	U	0.0177	0.0177	1.00	0.0478	pCi/g	09/11/21 15:09	09/22/21 22:28	1
Plutonium-239/240	0.008542	U	0.0251	0.0251	1.00	0.0570	pCi/g	09/11/21 15:09	09/22/21 22:28	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.9*		*30 - 110*	*09/11/21 15:09*	*09/22/21 22:28*	*1*

Lab Sample ID: LCS 160-526443/2-A
Matrix: Solid
Analysis Batch: 528358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526443

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			5.19	5.060		0.583	1.00	0.0607	pCi/g	97	80 - 125		
Plutonium-239/240			5.28	5.486		0.620	1.00	0.0256	pCi/g	104	81 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*86.1*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Lab Sample ID: 160-43230-A-10-E DU
Matrix: Solid
Analysis Batch: 528360

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526443

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	-0.0215	U		0.006830	U	0.0483	1.00	0.104	pCi/g			1.11	3
Plutonium-239/240	-0.00431	U		0.01595	U	0.0382	1.00	0.0776	pCi/g			0.92	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*92.2*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-530154/1-A
Matrix: Solid
Analysis Batch: 530618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530154

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.6216	U	0.924	0.927	5.00	1.57	pCi/g	10/05/21 14:19	10/07/21 11:26	1

Lab Sample ID: LCS 160-530154/2-A
Matrix: Solid
Analysis Batch: 530618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530154

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			84.4	88.92		9.99	5.00	1.59	pCi/g	105	75 - 125		

Lab Sample ID: 160-43306-1 MS
Matrix: Solid
Analysis Batch: 530618

Client Sample ID: FSS-171-082821
Prep Type: Total/NA
Prep Batch: 530154

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	1.16	U	77.4	68.77		7.81	5.00	1.45	pCi/g	87	29 - 128		

Lab Sample ID: 160-43306-1 DU
Matrix: Solid
Analysis Batch: 530618

Client Sample ID: FSS-171-082821
Prep Type: Total/NA
Prep Batch: 530154

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	1.16	U		1.892		1.01	5.00	1.56	pCi/g			1.02	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-525951/1-A
Matrix: Solid
Analysis Batch: 529694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525951

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.006501	U	0.155	0.155	0.200	0.278	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Americium-241	0.0000	U	0.0573	0.0573		0.161	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Cesium-137	-0.006036	U	0.0599	0.0599		0.0798	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Cobalt-60	0.03189	U	0.0295	0.0297		0.0430	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Europium-152	0.04119	U	0.0513	0.0514		0.160	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Europium-154	-0.03973	U	0.0811	0.0812		0.139	pCi/g	09/08/21 13:08	10/01/21 08:04	1
Europium-155	0.0009131	U	0.137	0.137		0.245	pCi/g	09/08/21 13:08	10/01/21 08:04	1

Other Detected Radionuclides	*MB Result*	*MB Qualifier*	*Count Uncert. (1.96σ+/-)*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*Prepared*	*Analyzed*	*Dil Fac*
Other Detected Radionuclide	*None*						*pCi/g*	*09/08/21 13:08*	*10/01/21 08:04*	*1*

Lab Sample ID: LCS 160-525951/2-A
Matrix: Solid
Analysis Batch: 529690

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525951

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.3	98.63		10.1		0.999	pCi/g	102	87 - 116
Cesium-137	26.2	26.25		2.73		0.149	pCi/g	100	87 - 120
Cobalt-60	8.52	8.483		0.875		0.0665	pCi/g	100	87 - 115

Lab Sample ID: 160-43306-7 DU
Matrix: Solid
Analysis Batch: 529694

Client Sample ID: FSS-177-082821
Prep Type: Total/NA
Prep Batch: 525951

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Radium-226	0.102	U	-0.04245	U	0.187	0.200	0.458	pCi/g	1.36	2
Americium-241	0.0685	U	0.05809	U	0.135		0.188	pCi/g	0.1	2
Cesium-137	-0.0490	U	0.0000	U	0.0397		0.106	pCi/g	1.06	2
Cobalt-60	0.0141	U	0.003590	U	0.0211		0.0462	pCi/g	0.81	2
Europium-152	0.141	U	0.09254	U	0.183		0.171	pCi/g	0.35	2
Europium-154	0.0593	U	0.07244	U	0.138		0.119	pCi/g	0.15	2
Europium-155	0.0397	U	0.0000	U	0.0844		0.386	pCi/g	0.57	2

Other Detected Radionuclides	*Sample Result*	*Sample Qual*	*DU Result*	*DU Qual*	*Total Uncert. (1.96σ+/-)*	*LOQ*	*MDC*	*Unit*	*DER*	*DER Limit*
K-40	*2.76*		*2.646*		*1.23*		*1.27*	*pCi/g*	*0.14*	*2*

Lab Sample ID: MB 160-526074/1-A
Matrix: Solid
Analysis Batch: 529922

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526074

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium 228	0.1036	U	0.188	0.189		0.230	pCi/g	09/09/21 10:24	10/03/21 13:13	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: MB 160-526074/1-A
Matrix: Solid
Analysis Batch: 529922

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526074

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Bismuth-212	0.3075	U	0.642	0.643		1.14	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Bismuth-214	0.01152	U	0.0575	0.0576		0.358	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Lead-212	-0.0001431	U	0.108	0.108		0.191	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Lead-214	0.002072	U	0.00233	0.00234		0.245	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Potassium-40	0.06795	U	0.799	0.799		0.960	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Radium-226	0.01152	U	0.0575	0.0576	1.00	0.358	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Thorium-232	0.1036	U	0.188	0.189		0.230	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Americium-241	-0.05699	U	0.160	0.160		0.277	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Cesium-137	0.0000	U	0.0131	0.0131		0.0440	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Cobalt-60	-0.01799	U	0.0769	0.0769		0.0931	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Europium-152	0.1107	U	0.0767	0.0775		0.165	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Europium-154	0.01246	U	0.0660	0.0661		0.118	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Europium-155	-0.1013	U	0.355	0.356		0.609	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Sodium-22	-0.01739	U	0.0478	0.0478		0.0900	pCi/g	09/09/21 10:24	10/03/21 13:13	1
Zinc-65	0.0000	U	0.0228	0.0228		0.235	pCi/g	09/09/21 10:24	10/03/21 13:13	1

Lab Sample ID: LCS 160-526074/2-A
Matrix: Solid
Analysis Batch: 529926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526074

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			96.3	100.5		10.3		1.09	pCi/g	104	87 - 116		
Cesium-137			26.2	26.51		2.77		0.169	pCi/g	101	87 - 120		
Cobalt-60			8.52	8.408		0.879		0.101	pCi/g	99	87 - 115		

Lab Sample ID: 410-53441-A-14-C DU
Matrix: Solid
Analysis Batch: 529920

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526074

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium 228	1.59			1.488		0.303		0.231	pCi/g			0.45	2
Bismuth-212	2.05			1.543		0.898		0.887	pCi/g			0.83	2
Bismuth-214	1.16			1.247		0.310		0.255	pCi/g			0.42	2
Lead-212	1.52			1.388		0.223		0.175	pCi/g			0.75	2
Lead-214	1.49			1.476		0.266		0.231	pCi/g			0.06	2
Potassium-40	11.7			12.19		2.26		0.794	pCi/g			0.33	2
Radium-226	1.16			1.247		0.310	1.00	0.255	pCi/g			0.42	2
Thorium-232	1.59			1.488		0.303		0.231	pCi/g			0.45	2
Americium-241	-0.0745	U		0.1042	U	0.239		0.406	pCi/g			1.03	2
Cesium-137	-0.0491	U		-0.00679 5	U	0.166		0.149	pCi/g			0.45	2
Cobalt-60	0.0733			-0.00491 7	U	0.108		0.132	pCi/g			1.33	2
Europium-152	0.0935	U		0.2099	U	0.360		0.263	pCi/g			0.49	2
Europium-154	0.0709	U		0.1304	U	0.186		0.196	pCi/g			0.59	2
Europium-155	0.0904	U		0.1052	U	0.329		0.561	pCi/g			0.08	2
Sodium-22	0.0337	U		0.08507		0.0488		0.0522	pCi/g			1.58	2

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 410-53441-A-14-C DU
Matrix: Solid
Analysis Batch: 529920

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526074

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Zinc-65	0.0559	U		0.0000	U	0.0244		0.480	pCi/g			0.53	2

Method: H3-04-RC - Tritium (LSC)

Lab Sample ID: MB 160-529475/1-A
Matrix: Solid
Analysis Batch: 530092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529475

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	0.05946	U	0.206	0.206	1.00	0.372	pCi/g	09/29/21 16:36	10/02/21 01:32	1

Lab Sample ID: LCS 160-529475/2-A
Matrix: Solid
Analysis Batch: 530092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529475

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			7.60	7.682		0.913	1.00	0.372	pCi/g	101	79 - 125		

Lab Sample ID: 160-43306-6 MS
Matrix: Solid
Analysis Batch: 530092

Client Sample ID: FSS-176-082821
Prep Type: Total/NA
Prep Batch: 529475

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	3.92		7.52	10.11		1.12	1.00	0.356	pCi/g	82	78 - 122		

Lab Sample ID: 160-43306-7 DU
Matrix: Solid
Analysis Batch: 530092

Client Sample ID: FSS-177-082821
Prep Type: Total/NA
Prep Batch: 529475

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	149			156.8		13.8	1.00	0.362	pCi/g			0.78	3

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-529541/1-A
Matrix: Solid
Analysis Batch: 530521

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529541

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	4.762		1.15	1.25	5.00	1.71	pCi/g	09/24/21 15:55	10/06/21 06:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*86.1*		*40 - 110*	*09/24/21 15:55*	*10/06/21 06:02*	*1*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-529541/2-A
Matrix: Solid
Analysis Batch: 530521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529541

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			21.5	20.84		2.70	5.00	1.71	pCi/g	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*92.4*		*40 - 110*

Lab Sample ID: 160-43306-7 DU
Matrix: Solid
Analysis Batch: 530521

Client Sample ID: FSS-177-082821
Prep Type: Total/NA
Prep Batch: 529541

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.387	U		-0.2680	U	0.874	5.00	1.59	pCi/g			1.02	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*88.1*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526531/1-A
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526531

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.1078	U	1.39	1.39	5.00	2.47	pCi/g	09/12/21 17:38	09/30/21 11:10	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*91.9*		*30 - 110*	*09/12/21 17:38*	*09/30/21 11:10*	*1*

Lab Sample ID: LCS 160-526531/2-A
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526531

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			19.8	18.68		3.08	5.00	2.73	pCi/g	94	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*86.1*		*30 - 110*

Lab Sample ID: 160-43230-A-10-I DU
Matrix: Solid
Analysis Batch: 529697

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 526531

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	1.42	U		0.1767	U	1.41	5.00	2.50	pCi/g			1.17	3

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Tracer	%Yield	DU Qualifier	Limits
Pu-242 (T)	92.2		30 - 110

Metals

Prep Batch: 549628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	3050B	
160-43306-2	FSS-172-082821	Total/NA	Solid	3050B	
160-43306-3	FSS-173-082821	Total/NA	Solid	3050B	
160-43306-4	FSS-174-082821	Total/NA	Solid	3050B	
160-43306-5	FSS-175-082821	Total/NA	Solid	3050B	
160-43306-6	FSS-176-082821	Total/NA	Solid	3050B	
160-43306-7	FSS-177-082821	Total/NA	Solid	3050B	
160-43306-8	FSS-178-090221	Total/NA	Solid	3050B	
160-43306-9	FSS-179-090221	Total/NA	Solid	3050B	
160-43306-10	FSS-180-090221	Total/NA	Solid	3050B	
MB 280-549628/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-549628/2-A	Lab Control Sample	Total/NA	Solid	3050B	
160-43306-1 MS	FSS-171-082821	Total/NA	Solid	3050B	
160-43306-1 MSD	FSS-171-082821	Total/NA	Solid	3050B	

Prep Batch: 550516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	7471B	
160-43306-2	FSS-172-082821	Total/NA	Solid	7471B	
160-43306-3	FSS-173-082821	Total/NA	Solid	7471B	
160-43306-4	FSS-174-082821	Total/NA	Solid	7471B	
160-43306-5	FSS-175-082821	Total/NA	Solid	7471B	
160-43306-6	FSS-176-082821	Total/NA	Solid	7471B	
160-43306-7	FSS-177-082821	Total/NA	Solid	7471B	
160-43306-8	FSS-178-090221	Total/NA	Solid	7471B	
160-43306-9	FSS-179-090221	Total/NA	Solid	7471B	
160-43306-10	FSS-180-090221	Total/NA	Solid	7471B	
MB 280-550516/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-550516/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-550516/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	
280-153122-A-1-O MS	Matrix Spike	Total/NA	Solid	7471B	
280-153122-A-1-P MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	

Analysis Batch: 550758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	6020B	549628
160-43306-2	FSS-172-082821	Total/NA	Solid	6020B	549628
160-43306-3	FSS-173-082821	Total/NA	Solid	6020B	549628
160-43306-4	FSS-174-082821	Total/NA	Solid	6020B	549628
160-43306-5	FSS-175-082821	Total/NA	Solid	6020B	549628
160-43306-6	FSS-176-082821	Total/NA	Solid	6020B	549628
160-43306-7	FSS-177-082821	Total/NA	Solid	6020B	549628
160-43306-8	FSS-178-090221	Total/NA	Solid	6020B	549628
160-43306-9	FSS-179-090221	Total/NA	Solid	6020B	549628
160-43306-10	FSS-180-090221	Total/NA	Solid	6020B	549628
MB 280-549628/1-A	Method Blank	Total/NA	Solid	6020B	549628
LCS 280-549628/2-A	Lab Control Sample	Total/NA	Solid	6020B	549628
160-43306-1 MS	FSS-171-082821	Total/NA	Solid	6020B	549628
160-43306-1 MSD	FSS-171-082821	Total/NA	Solid	6020B	549628

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Metals

Analysis Batch: 551172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	7471B	550516
160-43306-2	FSS-172-082821	Total/NA	Solid	7471B	550516
160-43306-3	FSS-173-082821	Total/NA	Solid	7471B	550516
160-43306-4	FSS-174-082821	Total/NA	Solid	7471B	550516
160-43306-5	FSS-175-082821	Total/NA	Solid	7471B	550516
160-43306-6	FSS-176-082821	Total/NA	Solid	7471B	550516
160-43306-7	FSS-177-082821	Total/NA	Solid	7471B	550516
160-43306-8	FSS-178-090221	Total/NA	Solid	7471B	550516
160-43306-9	FSS-179-090221	Total/NA	Solid	7471B	550516
160-43306-10	FSS-180-090221	Total/NA	Solid	7471B	550516
MB 280-550516/1-A	Method Blank	Total/NA	Solid	7471B	550516
LCS 280-550516/2-A	Lab Control Sample	Total/NA	Solid	7471B	550516
LCSD 280-550516/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	550516
280-153122-A-1-O MS	Matrix Spike	Total/NA	Solid	7471B	550516
280-153122-A-1-P MSD	Matrix Spike Duplicate	Total/NA	Solid	7471B	550516

Rad

Leach Batch: 524348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43230-A-10-E DU	Duplicate	Total/NA	Solid	Dry and Grind	
160-43230-A-10-G DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 525275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43280-A-26-F DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 525639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-53441-A-14-C DU	Duplicate	Total/NA	Solid	Dry and Grind	

Leach Batch: 525755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-8	FSS-178-090221	Total/NA	Solid	Dry and Grind	
160-43306-9	FSS-179-090221	Total/NA	Solid	Dry and Grind	
160-43306-10	FSS-180-090221	Total/NA	Solid	Dry and Grind	

Pre Prep Batch: 525769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	Pulverize	
160-43306-1	FSS-171-082821	Total/NA	Solid	Pulverize	
160-43306-2	FSS-172-082821	Total/NA	Solid	Pulverize	
160-43306-2	FSS-172-082821	Total/NA	Solid	Pulverize	
160-43306-3	FSS-173-082821	Total/NA	Solid	Pulverize	
160-43306-3	FSS-173-082821	Total/NA	Solid	Pulverize	
160-43306-3	FSS-173-082821	Total/NA	Solid	Pulverize	
160-43306-4	FSS-174-082821	Total/NA	Solid	Pulverize	
160-43306-5	FSS-175-082821	Total/NA	Solid	Pulverize	
160-43306-6	FSS-176-082821	Total/NA	Solid	Pulverize	
160-43306-6	FSS-176-082821	Total/NA	Solid	Pulverize	
160-43306-7	FSS-177-082821	Total/NA	Solid	Pulverize	

Rad (Continued)

Pre Prep Batch: 525769 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-7	FSS-177-082821	Total/NA	Solid	Pulverize	
160-43306-7 DU	FSS-177-082821	Total/NA	Solid	Pulverize	

Prep Batch: 525951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-2	FSS-172-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-3	FSS-173-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-4	FSS-174-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-5	FSS-175-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-6	FSS-176-082821	Total/NA	Solid	Fill_Geo-21	525769
160-43306-7	FSS-177-082821	Total/NA	Solid	Fill_Geo-21	525769
MB 160-525951/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-525951/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
160-43306-7 DU	FSS-177-082821	Total/NA	Solid	Fill_Geo-21	525769

Prep Batch: 526074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-8	FSS-178-090221	Total/NA	Solid	Fill_Geo-21	525755
160-43306-9	FSS-179-090221	Total/NA	Solid	Fill_Geo-21	525755
160-43306-10	FSS-180-090221	Total/NA	Solid	Fill_Geo-21	525755
MB 160-526074/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-526074/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
410-53441-A-14-C DU	Duplicate	Total/NA	Solid	Fill_Geo-21	525639

Prep Batch: 526443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	ExtChrom	525769
160-43306-2	FSS-172-082821	Total/NA	Solid	ExtChrom	525769
160-43306-3	FSS-173-082821	Total/NA	Solid	ExtChrom	525769
160-43306-4	FSS-174-082821	Total/NA	Solid	ExtChrom	525769
160-43306-5	FSS-175-082821	Total/NA	Solid	ExtChrom	525769
160-43306-6	FSS-176-082821	Total/NA	Solid	ExtChrom	525769
160-43306-7	FSS-177-082821	Total/NA	Solid	ExtChrom	525769
160-43306-8	FSS-178-090221	Total/NA	Solid	ExtChrom	525755
160-43306-9	FSS-179-090221	Total/NA	Solid	ExtChrom	525755
160-43306-10	FSS-180-090221	Total/NA	Solid	ExtChrom	525755
MB 160-526443/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526443/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43230-A-10-E DU	Duplicate	Total/NA	Solid	ExtChrom	524348

Prep Batch: 526530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	ExtChrom	525769
160-43306-2	FSS-172-082821	Total/NA	Solid	ExtChrom	525769
160-43306-3	FSS-173-082821	Total/NA	Solid	ExtChrom	525769
160-43306-4	FSS-174-082821	Total/NA	Solid	ExtChrom	525769
160-43306-5	FSS-175-082821	Total/NA	Solid	ExtChrom	525769
160-43306-6	FSS-176-082821	Total/NA	Solid	ExtChrom	525769
160-43306-7	FSS-177-082821	Total/NA	Solid	ExtChrom	525769
160-43306-8	FSS-178-090221	Total/NA	Solid	ExtChrom	525755

Rad (Continued)

Prep Batch: 526530 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-9	FSS-179-090221	Total/NA	Solid	ExtChrom	525755
160-43306-10	FSS-180-090221	Total/NA	Solid	ExtChrom	525755
MB 160-526530/1-A	Method Blank	Total/NA	Solid	ExtChrom	
LCS 160-526530/2-A	Lab Control Sample	Total/NA	Solid	ExtChrom	
160-43230-A-10-G DU	Duplicate	Total/NA	Solid	ExtChrom	524348

Prep Batch: 526531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	Leach_Precip	
160-43306-2	FSS-172-082821	Total/NA	Solid	Leach_Precip	
160-43306-3	FSS-173-082821	Total/NA	Solid	Leach_Precip	
160-43306-4	FSS-174-082821	Total/NA	Solid	Leach_Precip	
160-43306-5	FSS-175-082821	Total/NA	Solid	Leach_Precip	
160-43306-6	FSS-176-082821	Total/NA	Solid	Leach_Precip	
160-43306-7	FSS-177-082821	Total/NA	Solid	Leach_Precip	
160-43306-8	FSS-178-090221	Total/NA	Solid	Leach_Precip	
160-43306-9	FSS-179-090221	Total/NA	Solid	Leach_Precip	
160-43306-10	FSS-180-090221	Total/NA	Solid	Leach_Precip	
MB 160-526531/1-A	Method Blank	Total/NA	Solid	Leach_Precip	
LCS 160-526531/2-A	Lab Control Sample	Total/NA	Solid	Leach_Precip	
160-43230-A-10-I DU	Duplicate	Total/NA	Solid	Leach_Precip	

Prep Batch: 528280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	DPS-7	525769
160-43306-2	FSS-172-082821	Total/NA	Solid	DPS-7	525769
160-43306-3	FSS-173-082821	Total/NA	Solid	DPS-7	525769
160-43306-4	FSS-174-082821	Total/NA	Solid	DPS-7	525769
160-43306-5	FSS-175-082821	Total/NA	Solid	DPS-7	525769
160-43306-6	FSS-176-082821	Total/NA	Solid	DPS-7	525769
160-43306-7	FSS-177-082821	Total/NA	Solid	DPS-7	525769
160-43306-8	FSS-178-090221	Total/NA	Solid	DPS-7	525755
160-43306-9	FSS-179-090221	Total/NA	Solid	DPS-7	525755
160-43306-10	FSS-180-090221	Total/NA	Solid	DPS-7	525755
MB 160-528280/1-A	Method Blank	Total/NA	Solid	DPS-7	
LCS 160-528280/2-A	Lab Control Sample	Total/NA	Solid	DPS-7	
160-43280-A-26-F DU	Duplicate	Total/NA	Solid	DPS-7	525275

Prep Batch: 529475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-2	FSS-172-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-3	FSS-173-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-4	FSS-174-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-5	FSS-175-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-6	FSS-176-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-7	FSS-177-082821	Total/NA	Solid	LSC_Dist_Susp	
MB 160-529475/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-529475/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43306-6 MS	FSS-176-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-7 DU	FSS-177-082821	Total/NA	Solid	LSC_Dist_Susp	

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Rad

Prep Batch: 529492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-8	FSS-178-090221	Total/NA	Solid	LSC_Dist_Susp	
160-43306-9	FSS-179-090221	Total/NA	Solid	LSC_Dist_Susp	
160-43306-10	FSS-180-090221	Total/NA	Solid	LSC_Dist_Susp	
MB 160-529492/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-529492/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43306-8 MS	FSS-178-090221	Total/NA	Solid	LSC_Dist_Susp	
160-43306-10 DU	FSS-180-090221	Total/NA	Solid	LSC_Dist_Susp	

Prep Batch: 529541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-2	FSS-172-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-3	FSS-173-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-4	FSS-174-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-5	FSS-175-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-6	FSS-176-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-7	FSS-177-082821	Total/NA	Solid	Ext_Chrom_LSC	525769
160-43306-8	FSS-178-090221	Total/NA	Solid	Ext_Chrom_LSC	525755
160-43306-9	FSS-179-090221	Total/NA	Solid	Ext_Chrom_LSC	525755
160-43306-10	FSS-180-090221	Total/NA	Solid	Ext_Chrom_LSC	525755
MB 160-529541/1-A	Method Blank	Total/NA	Solid	Ext_Chrom_LSC	
LCS 160-529541/2-A	Lab Control Sample	Total/NA	Solid	Ext_Chrom_LSC	
160-43306-7 DU	FSS-177-082821	Total/NA	Solid	Ext_Chrom_LSC	525769

Prep Batch: 530154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-2	FSS-172-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-3	FSS-173-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-4	FSS-174-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-5	FSS-175-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-6	FSS-176-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-7	FSS-177-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-8	FSS-178-090221	Total/NA	Solid	LSC_Dist_Susp	
160-43306-9	FSS-179-090221	Total/NA	Solid	LSC_Dist_Susp	
160-43306-10	FSS-180-090221	Total/NA	Solid	LSC_Dist_Susp	
MB 160-530154/1-A	Method Blank	Total/NA	Solid	LSC_Dist_Susp	
LCS 160-530154/2-A	Lab Control Sample	Total/NA	Solid	LSC_Dist_Susp	
160-43306-1 MS	FSS-171-082821	Total/NA	Solid	LSC_Dist_Susp	
160-43306-1 DU	FSS-171-082821	Total/NA	Solid	LSC_Dist_Susp	

Organic Prep

Analysis Batch: 525772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-1	FSS-171-082821	Total/NA	Solid	Part Size Red	
160-43306-2	FSS-172-082821	Total/NA	Solid	Part Size Red	
160-43306-3	FSS-173-082821	Total/NA	Solid	Part Size Red	
160-43306-4	FSS-174-082821	Total/NA	Solid	Part Size Red	
160-43306-5	FSS-175-082821	Total/NA	Solid	Part Size Red	
160-43306-6	FSS-176-082821	Total/NA	Solid	Part Size Red	

Organic Prep (Continued)

Analysis Batch: 525772 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43306-7	FSS-177-082821	Total/NA	Solid	Part Size Red	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43306-1

Method: 905 - Strontium-90 (GFPC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Sr	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
160-43280-A-26-F DU	Duplicate	45.5	91.2
160-43306-1	FSS-171-082821	84.1	86.0
160-43306-2	FSS-172-082821	71.0	94.6
160-43306-3	FSS-173-082821	83.1	86.4
160-43306-4	FSS-174-082821	64.5	92.0
160-43306-5	FSS-175-082821	80.7	82.6
160-43306-6	FSS-176-082821	69.0	69.5
160-43306-7	FSS-177-082821	70.9	91.2
160-43306-8	FSS-178-090221	77.9	86.7
160-43306-9	FSS-179-090221	87.7	91.6
160-43306-10	FSS-180-090221	83.4	87.5
LCS 160-528280/2-A	Lab Control Sample	72.9	89.3
MB 160-528280/1-A	Method Blank	73.2	82.6

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Pu-242 (T)
Lab Sample ID	Client Sample ID	(30-110)
160-43230-A-10-E DU	Duplicate	92.2
160-43306-1	FSS-171-082821	42.4
160-43306-2	FSS-172-082821	37.1
160-43306-3	FSS-173-082821	50.9
160-43306-4	FSS-174-082821	48.1
160-43306-5	FSS-175-082821	47.0
160-43306-6	FSS-176-082821	45.8
160-43306-7	FSS-177-082821	50.5
160-43306-8	FSS-178-090221	60.0
160-43306-9	FSS-179-090221	67.4
160-43306-10	FSS-180-090221	68.3
LCS 160-526443/2-A	Lab Control Sample	86.1
MB 160-526443/1-A	Method Blank	91.9

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		U-232
Lab Sample ID	Client Sample ID	(30-110)
160-43230-A-10-G DU	Duplicate	88.6
160-43306-1	FSS-171-082821	49.3
160-43306-2	FSS-172-082821	52.4
160-43306-3	FSS-173-082821	66.3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-43306-4	FSS-174-082821	68.2
160-43306-5	FSS-175-082821	54.6
160-43306-6	FSS-176-082821	61.2
160-43306-7	FSS-177-082821	45.5
160-43306-8	FSS-178-090221	63.3
160-43306-9	FSS-179-090221	68.6
160-43306-10	FSS-180-090221	71.4
LCS 160-526530/2-A	Lab Control Sample	91.9
MB 160-526530/1-A	Method Blank	85.5

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-43306-1	FSS-171-082821	88.7
160-43306-2	FSS-172-082821	91.6
160-43306-3	FSS-173-082821	91.7
160-43306-4	FSS-174-082821	81.9
160-43306-5	FSS-175-082821	93.3
160-43306-6	FSS-176-082821	97.8
160-43306-7	FSS-177-082821	94.0
160-43306-7 DU	FSS-177-082821	88.1
160-43306-8	FSS-178-090221	85.0
160-43306-9	FSS-179-090221	93.6
160-43306-10	FSS-180-090221	90.4
LCS 160-529541/2-A	Lab Control Sample	92.4
MB 160-529541/1-A	Method Blank	86.1

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43230-A-10-I DU	Duplicate	92.2
160-43306-1	FSS-171-082821	42.4
160-43306-2	FSS-172-082821	37.1
160-43306-3	FSS-173-082821	50.9
160-43306-4	FSS-174-082821	48.1
160-43306-5	FSS-175-082821	47.0
160-43306-6	FSS-176-082821	45.8
160-43306-7	FSS-177-082821	50.5
160-43306-8	FSS-178-090221	60.0
160-43306-9	FSS-179-090221	67.4

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43306-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0245 - Plutonium-241 (LSC) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43306-10	FSS-180-090221	68.3
LCS 160-526531/2-A	Lab Control Sample	86.1
MB 160-526531/1-A	Method Blank	91.9

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Subcontract Data

RJ Lee Group, Inc.
350 Hochberg Road, Monroeville, PA 15146
Tel: 724-325-1776 | Fax: 724-733-1799

Laboratory Report

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
United States
Attention: Ivan H Vania
Telephone: 314-298-8566

Report Date	10/12/2021
Sample Receipt Date	09/15/2021
RJ Lee Group Job No.	AOH1063479-0
Authorization/P.O. No.	
Client Job No./Name	160-43306-1

Analysis: Asbestos in Bulk Samples by Point Count
Method: NYELAP Method 198.1

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10547936.HPL	FSS-171-082821 (16043306-1)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547937.HPL	FSS-172-082821 (16043306-2)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547938.HPL	FSS-173-082821 (16043306-3)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/12/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43306-1 RJ Lee Group Job No: AOH1063479-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10547939.HPL	FSS-174-082821 (16043306-4)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547940.HPL	FSS-175-082821 (16043306-5)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547941.HPL	FSS-176-082821 (16043306-6)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Grey Powder 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547942.HPL	FSS-177-082821 (16043306-7)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/12/2021
Description:	Grey Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547943.HPL	FSS-178-090221 (16043306-8)	Yes	1	ND		100.00	Q, CA, AM, F, OR, OP, MI, M	EAF-10/11/2021
Description:	Brown Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

Client Job No./Name: 160-43306-1 RJ Lee Group Job No: AOH1063479-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date
10547944.HPL	FSS-179-090221 (16043306-9)	Yes	1	ND		100.00	Q, CA, AM, F, OR, OP, MI, M	EAF-10/11/2021
Description:	Brown Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								
10547945.HPL	FSS-180-090221 (16043306-10)	Yes	1	ND		100.00	Q, CA, AM, F, OP, MI, M	EAF-10/11/2021
Description:	Beige Sediment 4 Slides Scanned. No Asbestos Detected. NY ELAP Method 198.1.							
Weight Loss: 0.0%								

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Laboratory Report (Cont)

Client Job No./Name: 160-43306-1 RJ Lee Group Job No: AOH1063479-0

RJLG Sample Number	Client Sample Number	Homogeneous	# of Layers	Asbestos Detected(%)	Non-Asbestos Fibers(%)	Non-Fibrous Materials(%)	Matrix Material	Analyst - Analysis Date

Authorized Signature: Elizabeth A Fischer

Elizabeth Fischer, Microscopist

ASBESTOS

AM = Amosite
AC = Actinolite
AN = Anthophyllite
CH = Chrysotile
CR = Crocidolite
TR = Tremolite

NON-ASBESTOS

CE = Cellulose
MW = Mineral Wool
FG = Fibrous Glass
SF = Synthetic Fibers
H = Hair
W = Wollastonite
OF = Other Fibers

NON-FIBROUS MATERIALS

AM = Amphibole
B = Binder
CA = Carbonates
CL = Clay
F = Feldspar
G = Gypsum
HY = Hydromagnesite
M = Miscellaneous
MI = Mica
OP = Opaque
OR = Organic
P = Perlite
Q = Quartz
T = Tar
V = Vermiculite

DISCLAIMER NOTES

· "ND" indicates no asbestos was detected; the method detection limit is 0.25%.
· "Trace" or "<" indicates asbestos was identified in the sample, but the concentration is less than the method quantitation limit. PLM coefficients of variance range from approximately 1.8 at the quantitation limit of 0.25% to 0.32 at high fiber concentrations.
· Samples are archived for three months following analysis and are then properly discarded.
· These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which these results are used or interpreted.
· This test report relates to the items tested.
· This report is not valid unless it bears the name of a NVLAP Lab Code 101208-0 approved signatory.
· Any reproduction of this document must be in full in order for the report to be valid.
· This report may not be used to claim product endorsement by NVLAP Lab Code 101208-0, any agency of the U.S. Government or any other laboratory accrediting agency.
· Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar nonfriable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as "non-asbestos-containing."
· Sample(s) for this project were analyzed at our: Monroeville, PA (AIHA LAP, LLC. #100364, NY ELAP #10884) facility.
· If RJ Lee Group, Inc. did not collect the samples analyzed, the verifiability of the laboratorys results are limited to the reported values.

A-7.11
Rinsate Samples

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

Laboratory Job ID: 160-43229-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/14/2021 5:05:06 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-43229-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43229-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, St. Louis attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an ""as received"" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 8/27/2021 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 3.3º C, 10.5º C, 25.6º C and 35.6º C.

TOTAL METALS (ICP/MS)

Job ID: 160-43229-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

Sample Rinsate-082621 (160-43229-1) was analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 09/03/2021 and analyzed on 09/07/2021.

For ICPMS Metals, a 2X dilution was performed. This is a standard dilution that is performed by TestAmerica St. Louis on all samples analyzed by method SW-846 6020A. The dilution is performed in order to have the matrix of the samples (i.e. the concentration of acids) match the matrix of the standards used for calibration and instrument quality control purposes. The MDL studies analyzed by this method undergo the same 2X dilution, and all detection limits are based on this. As such, MDL's and RL's are not affected by the dilution.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

MERCURY (CVAA)
Sample Rinsate-082621 (160-43229-1) was analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7470A. The samples were prepared on 09/03/2021 and analyzed on 09/04/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Sample Rinsate-082621 (160-43229-1) was analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 09/02/2021 and analyzed on 09/30/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

STRONTIUM-90 (GFPC)
Sample Rinsate-082621 (160-43229-1) was analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were prepared on 10/05/2021 and analyzed on 10/13/2021.

Preparation Batch 160-527654:
Insufficient sample volume was available to prepare a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinsate-082621 (160-43229-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Sample Rinsate-082621 (160-43229-1) was analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 09/21/2021 and analyzed on 09/23/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)
Sample Rinsate-082621 (160-43229-1) was analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with USDOE. The samples were prepared on 09/12/2021 and analyzed on 09/23/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)
Sample Rinsate-082621 (160-43229-1) was analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 09/13/2021 and analyzed on 09/23/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CARBON-14 BY LSC
Sample Rinsate-082621 (160-43229-1) was analyzed for Carbon-14 by LSC in accordance with EERF. The samples were prepared on 09/28/2021 and analyzed on 09/29/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 160-43229-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

RADIUM-226 & OTHER GAMMA EMITTERS (GS)-21 DAY INGROWTH

Sample Rinsate-082621 (160-43229-1) was analyzed for Radium-226 & other gamma emitters (GS)-21 day ingrowth in accordance with GA-01-R. The samples were prepared on 08/30/2021 and analyzed on 09/30/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NICKEL 59/63

Sample Rinsate-082621 (160-43229-1) was analyzed for Nickel 59/63 in accordance with LSC-Nickel. The samples were prepared on 10/07/2021 and analyzed on 10/10/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PLUTONIUM 241

Sample Rinsate-082621 (160-43229-1) was analyzed for Plutonium 241 in accordance with LSC-Pu241. The samples were prepared on 09/13/2021 and analyzed on 10/02/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date: 08-26-21**	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier: Fed Ex**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: J. Pratt
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90	ISO U	ISO Pu	ISO Pu 241	Ni-63	H-3	C-14	Mets/Hg	Sample Specific Notes:
Rinsate - 082621	26-Aug	16:15	C	S	10	N	N	2	1	1	1	1	1	1	1	1	Sample Tools

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:8-26-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FEDEX	Company:	Date/Time:	Received by: Michael Cunningham	Company: ETA STL	Date/Time: 8/27/2021 10:15
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

160-43229 Chain of Custody

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43229-1

Login Number: 43229
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43229-1

Login Number: 43229
List Number: 2
Creator: Dubicki, Adam L

List Source: Eurofins TestAmerica, Denver
List Creation: 08/31/21 03:54 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43229-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
903.0	Radium-226 (GFPC)	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
3020A	Preparation, Total Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL
PrecSep-7	Preparation, Precipitate Separation (7-Day In-Growth)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43229-1	Rinsate-082621	Water	08/26/21 16:15	08/27/21 10:15

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Client Sample ID: Rinsate-082621

Date Collected: 08/26/21 16:15
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43229-1

Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		09/03/21 14:26	09/07/21 20:57	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.027	ug/L		09/03/21 14:30	09/04/21 13:33	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185	U	0.198	0.199	1.00	0.328	pCi/L	09/02/21 10:54	09/30/21 09:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba	*92.1*		*40 - 110*	*09/02/21 10:54*	*09/30/21 09:48*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.255	U	0.183	0.184	3.00	0.293	pCi/L	10/05/21 10:43	10/13/21 13:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.0*		*40 - 110*	*10/05/21 10:43*	*10/13/21 13:31*	*1*
Y Carrier	*93.8*		*40 - 110*	*10/05/21 10:43*	*10/13/21 13:31*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-103	U	187	187	500	367	pCi/L	09/21/21 10:22	09/23/21 00:56	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0238	U	0.0669	0.0670	1.00	0.140	pCi/L	09/12/21 18:07	09/23/21 10:26	1
Plutonium-239/240	0.00795	U	0.0480	0.0480	1.00	0.119	pCi/L	09/12/21 18:07	09/23/21 10:26	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*100*		*30 - 110*	*09/12/21 18:07*	*09/23/21 10:26*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	-0.0232	U	0.0514	0.0514	1.00	0.153	pCi/L	09/13/21 08:02	09/23/21 10:30	1
Uranium-235	-0.00481	U	0.0432	0.0432	1.00	0.137	pCi/L	09/13/21 08:02	09/23/21 10:30	1
Uranium-238	0.0116	U	0.0312	0.0312	1.00	0.0747	pCi/L	09/13/21 08:02	09/23/21 10:30	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.6*		*30 - 110*	*09/13/21 08:02*	*09/23/21 10:30*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Client Sample ID: Rinsate-082621

Date Collected: 08/26/21 16:15
Date Received: 08/27/21 10:15

Lab Sample ID: 160-43229-1

Matrix: Water

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	6.24	U	7.55	7.58	20.0	12.7	pCi/L	09/28/21 09:03	09/29/21 14:40	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	16.2	U	26.3	26.4		34.0	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Americium-241	1.01	U	14.2	14.2		24.4	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Bismuth-212	67.9	U	129	129		219	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Bismuth-214	**21.8**		16.2	16.4		18.9	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Cesium-137	-1.72	U	6.50	6.50	20.0	11.4	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Cobalt-60	1.99	U	5.91	5.91		9.01	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Europium-152	1.21	U	1.71	1.72		29.7	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Europium-154	-1.72	U	12.3	12.3		17.2	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Europium-155	-4.62	U	36.0	36.0		61.4	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Lead-212	-15.2	U	14.3	14.4		20.5	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Lead-214	10.9	U	14.0	14.1		18.3	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Potassium-40	**112**		56.9	58.3		51.1	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Radium-226	**21.8**		16.2	16.4	50.0	18.9	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Radium-228	16.2	U	26.3	26.4	50.0	34.0	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Sodium-22	**6.48**		4.49	4.55		6.24	pCi/L	08/30/21 11:04	09/30/21 15:57	1
Zinc-65	0.000	U	3.08	3.08		26.8	pCi/L	08/30/21 11:04	09/30/21 15:57	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.708	U	1.44	1.44	5.00	2.53	pCi/L	10/07/21 12:39	10/10/21 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*101*		*40 - 110*	*10/07/21 12:39*	*10/10/21 16:43*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	2.46	U J	2.58	2.59	5.00	4.40	pCi/L	09/13/21 08:05	10/02/21 11:40	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*100*		*30 - 110*	*09/13/21 08:05*	*10/02/21 11:40*	*1*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-548726/1-A
Matrix: Water
Analysis Batch: 549097

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548726

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		09/03/21 14:26	09/07/21 20:09	1

Lab Sample ID: LCS 280-548726/2-A
Matrix: Water
Analysis Batch: 549097

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548726

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	39.7		ug/L		99	88 - 115

Lab Sample ID: LCSD 280-548726/3-A
Matrix: Water
Analysis Batch: 549097

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548726

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	40.0	39.5		ug/L		99	88 - 115	1	20

Lab Sample ID: 160-43254-C-4-E MS
Matrix: Water
Analysis Batch: 549097

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 548726

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	2.5	J	40.0	41.9		ug/L		99	88 - 115

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-548663/1-A
Matrix: Water
Analysis Batch: 548878

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548663

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.027	ug/L		09/03/21 14:30	09/04/21 12:52	1

Lab Sample ID: LCS 280-548663/2-A
Matrix: Water
Analysis Batch: 548878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548663

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.24		ug/L		105	82 - 119

Lab Sample ID: LCSD 280-548663/3-A
Matrix: Water
Analysis Batch: 548878

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 548663

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	5.21		ug/L		104	82 - 119	0	20

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 280-152425-H-1-E MS
Matrix: Water
Analysis Batch: 548878

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 548663

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.080	U	5.00	5.26		ug/L		105	82 - 119		

Lab Sample ID: 280-152425-H-1-F MSD
Matrix: Water
Analysis Batch: 548878

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 548663

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.080	U	5.00	5.18		ug/L		104	82 - 119	1	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-525242/25-A
Matrix: Water
Analysis Batch: 529520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525242

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01343	U	0.131	0.131	1.00	0.284	pCi/L	09/02/21 10:54	09/30/21 07:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba	*85.4*		*40 - 110*	*09/02/21 10:54*	*09/30/21 07:59*	*1*

Lab Sample ID: LCS 160-525242/1-A
Matrix: Water
Analysis Batch: 529546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525242

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	11.54		1.40	1.00	0.321	pCi/L	102	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba	*74.9*		*40 - 110*

Lab Sample ID: 500-204225-K-12-A DU
Matrix: Water
Analysis Batch: 529520

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 525242

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Radium-226	-0.00922	U		0.05716	U	0.124	1.00	0.234	pCi/L			0.74	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba	*90.0*		*40 - 110*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-530106/21-A
Matrix: Water
Analysis Batch: 531341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530106

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.1765	U	0.209	0.209	3.00	0.352	pCi/L	10/05/21 10:43	10/13/21 13:31	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*82.8*		*40 - 110*	*10/05/21 10:43*	*10/13/21 13:31*	*1*
Y Carrier	*89.7*		*40 - 110*	*10/05/21 10:43*	*10/13/21 13:31*	*1*

Lab Sample ID: LCS 160-530106/1-A
Matrix: Water
Analysis Batch: 531765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530106

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	7.268		0.790	3.00	0.335	pCi/L	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*82.3*		*40 - 110*
Y Carrier	*89.7*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-527847/1-A
Matrix: Water
Analysis Batch: 528482

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 527847

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-113.1	U	178	179	500	347	pCi/L	09/21/21 10:22	09/22/21 22:38	1

Lab Sample ID: LCS 160-527847/2-A
Matrix: Water
Analysis Batch: 528482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 527847

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			2280	2059		400	500	367	pCi/L	90	75 - 114		

Lab Sample ID: 160-43285-C-1-B MS
Matrix: Water
Analysis Batch: 528482

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 527847

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium	-112	U	2280	1923		379	500	352	pCi/L	85	67 - 130		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43286-C-1-B DU
Matrix: Water
Analysis Batch: 528482

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 527847

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Tritium	-38.3	U		-90.09	U	186	500	360	pCi/L			0.38	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526595/1-A
Matrix: Water
Analysis Batch: 528550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526595

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.01660	U	0.0488	0.0488	1.00	0.111	pCi/L	09/13/21 08:02	09/23/21 10:30	1
Uranium-235	0.07748	U	0.0816	0.0819	1.00	0.100	pCi/L	09/13/21 08:02	09/23/21 10:30	1
Uranium-238	-0.004143	U	0.0372	0.0372	1.00	0.118	pCi/L	09/13/21 08:02	09/23/21 10:30	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*99.5*		*30 - 110*	*09/13/21 08:02*	*09/23/21 10:30*	*1*

Lab Sample ID: LCS 160-526595/2-A
Matrix: Water
Analysis Batch: 528551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526595

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Uranium-233/234			12.7	12.45		1.35	1.00	0.123	pCi/L	98	75 - 125		
Uranium-238			13.0	13.50		1.44	1.00	0.116	pCi/L	104	75 - 125		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*97.2*		*30 - 110*

Lab Sample ID: 160-43229-1 DU
Matrix: Water
Analysis Batch: 528554

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 526595

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Uranium-233/234	-0.0232	U		0.03837	U	0.0630	1.00	0.115	pCi/L			1.48	3
Uranium-235	-0.00481	U		-0.00477 5	U	0.00937	1.00	0.0924	pCi/L			0	3
Uranium-238	0.0116	U		0.003829	U	0.0327	1.00	0.0947	pCi/L			0.34	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Uranium-232	*90.2*		*30 - 110*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526538/1-A
Matrix: Water
Analysis Batch: 528564

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526538

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.007888	U	0.0109	0.0110	1.00	0.0884	pCi/L	09/12/21 18:07	09/23/21 10:26	1
Plutonium-239/240	0.0000	U	0.0346	0.0346	1.00	0.105	pCi/L	09/12/21 18:07	09/23/21 10:26	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.4*		*30 - 110*	*09/12/21 18:07*	*09/23/21 10:26*	*1*

Lab Sample ID: LCS 160-526538/2-A
Matrix: Water
Analysis Batch: 528565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526538

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			10.4	10.58		1.20	1.00	0.118	pCi/L	102	79 - 115		
Plutonium-239/240			10.6	10.86		1.22	1.00	0.0500	pCi/L	103	85 - 120		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*88.4*		*30 - 110*

Lab Sample ID: 160-43229-1 DU
Matrix: Water
Analysis Batch: 528567

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 526538

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-238	0.0238	U		-0.03509	U	0.0635	1.00	0.178	pCi/L			1.25	3
Plutonium-239/240	0.00795	U		-0.01951	U	0.0383	1.00	0.133	pCi/L			0.88	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*107*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-529125/1-A
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529125

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	6.426	U	7.73	7.76	20.0	13.1	pCi/L	09/28/21 09:03	09/29/21 11:22	1

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: LCS 160-529125/2-A
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529125

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			1120	1040		113	20.0	12.7	pCi/L	92	75 - 125		

Lab Sample ID: 160-43229-1 MS
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 529125

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14	6.24	U	1120	1051		114	20.0	12.8	pCi/L	93	37 - 121		

Lab Sample ID: 160-43229-1 DU
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 529125

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Carbon-14	6.24	U		5.766	U	7.63	20.0	12.8	pCi/L			0.09	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-524655/1-A
Matrix: Water
Analysis Batch: 529634

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524655

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	13.69	U	24.6	24.7		28.9	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Americium-241	-6.221	U	15.0	15.0		25.5	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Bismuth-212	39.71	U	93.3	93.4		160	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Bismuth-214	-26.48	U	19.2	19.4		47.5	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Cesium-137	-0.05156	U	7.31	7.31	20.0	13.0	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Cobalt-60	1.720	U	5.32	5.33		10.2	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Europium-152	16.31	U	9.43	9.62		26.9	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Europium-154	7.134	U	11.1	11.2		17.0	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Europium-155	3.469	U	12.4	12.4		57.3	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Lead-212	-4.586	U	12.6	12.6		21.1	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Lead-214	-11.52	U	13.7	13.8		23.6	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Potassium-40	106.1		53.8	55.2		53.4	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Radium-226	-26.48	U	19.2	19.4	50.0	47.5	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Radium-228	13.69	U	24.6	24.7	50.0	28.9	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Sodium-22	0.7534	U	6.77	6.77		12.4	pCi/L	08/30/21 11:04	09/30/21 18:02	1
Zinc-65	0.0000	U	5.63	5.63		26.9	pCi/L	08/30/21 11:04	09/30/21 18:02	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: LCS 160-524655/2-A
Matrix: Water
Analysis Batch: 528701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524655

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			135000	133300		15400		339	pCi/L	98	86 - 111		
Cesium-137			42300	41810		4820	20.0	100	pCi/L	99	90 - 110		
Cobalt-60			21700	21320		2460		82.2	pCi/L	98	89 - 110		

Lab Sample ID: 160-43229-1 DU
Matrix: Water
Analysis Batch: 529693

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 524655

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Actinium-228	16.2	U		14.09	U	11.0		34.0	pCi/L			0.15	3
Americium-241	1.01	U		-6.616	U	16.3		27.6	pCi/L			0.69	3
Bismuth-212	67.9	U		61.95	U	114		193	pCi/L			0.07	3
Bismuth-214	21.8			-15.93	U	23.9		52.1	pCi/L			2.55	3
Cesium-137	-1.72	U		-1.410	U	6.18	20.0	10.9	pCi/L			0.07	3
Cobalt-60	1.99	U		2.321	U	6.03		9.01	pCi/L			0.08	3
Europium-152	1.21	U		11.23	U	17.4		26.5	pCi/L			1.12	3
Europium-154	-1.72	U		8.119	U	10.1		17.3	pCi/L			1.21	3
Europium-155	-4.62	U		-0.00000 2712	U	35.4		60.6	pCi/L			0.18	3
Lead-212	-15.2	U		11.80	U	10.7		12.6	pCi/L			2.95	3
Lead-214	10.9	U		17.02		10.7		16.3	pCi/L			0.67	3
Potassium-40	112			122.1		44.0		27.3	pCi/L			0.26	3
Radium-226	21.8			-15.93	U	23.9	50.0	52.1	pCi/L			2.55	3
Radium-228	16.2	U		14.09	U	11.0	50.0	34.0	pCi/L			0.15	3
Sodium-22	6.48			1.658	U	4.55		8.32	pCi/L			1.47	3
Zinc-65	0.000	U		7.251	U	12.7		21.9	pCi/L			1.09	3

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-530499/1-A
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530499

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.396	U	1.49	1.50	5.00	2.57	pCi/L	10/07/21 12:39	10/10/21 14:31	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*100*		*40 - 110*	*10/07/21 12:39*	*10/10/21 14:31*	*1*

Lab Sample ID: LCS 160-530499/2-A
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530499

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Nickel-63			38.7	36.78		4.61	5.00	2.55	pCi/L	95	75 - 125		

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: LCS 160-530499/2-A
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530499

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*99.0*		*40 - 110*

Lab Sample ID: 160-43375-J-2-B DU
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 530499

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.826	U		2.104	U	1.49	5.00	2.49	pCi/L			1.23	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*104*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526596/1-A
Matrix: Water
Analysis Batch: 529903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526596

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	0.2719	U	2.14	2.14	5.00	3.72	pCi/L	09/13/21 08:05	10/02/21 10:00	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*99.4*		*30 - 110*	*09/13/21 08:05*	*10/02/21 10:00*	*1*

Lab Sample ID: LCS 160-526596/2-A
Matrix: Water
Analysis Batch: 529903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526596

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			39.7	46.60	J	6.19	5.00	4.25	pCi/L	117	77 - 115		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*88.4*		*30 - 110*

Lab Sample ID: 160-43229-1 DU
Matrix: Water
Analysis Batch: 529903

Client Sample ID: Rinsate-082621
Prep Type: Total/NA
Prep Batch: 526596

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Plutonium-241	2.46	U J		1.962	U J	2.13	5.00	3.50	pCi/L			0.29	3

Tracer	*DU %Yield*	*DU Qualifier*	*Limits*
Pu-242 (T)	*107*		*30 - 110*

QC Association Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Metals

Prep Batch: 548663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	7470A	
MB 280-548663/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-548663/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-548663/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
280-152425-H-1-E MS	Matrix Spike	Total/NA	Water	7470A	
280-152425-H-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 548726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	3020A	
MB 280-548726/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-548726/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-548726/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	
160-43254-C-4-E MS	Matrix Spike	Total/NA	Water	3020A	

Analysis Batch: 548878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	7470A	548663
MB 280-548663/1-A	Method Blank	Total/NA	Water	7470A	548663
LCS 280-548663/2-A	Lab Control Sample	Total/NA	Water	7470A	548663
LCSD 280-548663/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	548663
280-152425-H-1-E MS	Matrix Spike	Total/NA	Water	7470A	548663
280-152425-H-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	548663

Analysis Batch: 549097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	6020A	548726
MB 280-548726/1-A	Method Blank	Total/NA	Water	6020A	548726
LCS 280-548726/2-A	Lab Control Sample	Total/NA	Water	6020A	548726
LCSD 280-548726/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	548726
160-43254-C-4-E MS	Matrix Spike	Total/NA	Water	6020A	548726

Rad

Prep Batch: 524655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	Fill_Geo-21	
MB 160-524655/1-A	Method Blank	Total/NA	Water	Fill_Geo-21	
LCS 160-524655/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-21	
160-43229-1 DU	Rinsate-082621	Total/NA	Water	Fill_Geo-21	

Prep Batch: 525242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	PrecSep-21	
MB 160-525242/25-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-525242/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-204225-K-12-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 526538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	ExtChrom	

Rad (Continued)

Prep Batch: 526538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-526538/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-526538/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
160-43229-1 DU	Rinsate-082621	Total/NA	Water	ExtChrom	

Prep Batch: 526595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	ExtChrom	
MB 160-526595/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-526595/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
160-43229-1 DU	Rinsate-082621	Total/NA	Water	ExtChrom	

Prep Batch: 526596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	Leach_Precip	
MB 160-526596/1-A	Method Blank	Total/NA	Water	Leach_Precip	
LCS 160-526596/2-A	Lab Control Sample	Total/NA	Water	Leach_Precip	
160-43229-1 DU	Rinsate-082621	Total/NA	Water	Leach_Precip	

Prep Batch: 527847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	LSC_Dist_Susp	
MB 160-527847/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-527847/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-43285-C-1-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-43286-C-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 529125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	LSC_Dist_Susp	
MB 160-529125/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-529125/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-43229-1 MS	Rinsate-082621	Total/NA	Water	LSC_Dist_Susp	
160-43229-1 DU	Rinsate-082621	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 530106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	PrecSep-7	
MB 160-530106/21-A	Method Blank	Total/NA	Water	PrecSep-7	
LCS 160-530106/1-A	Lab Control Sample	Total/NA	Water	PrecSep-7	

Prep Batch: 530499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43229-1	Rinsate-082621	Total/NA	Water	Ext_Chrom_LSC	
MB 160-530499/1-A	Method Blank	Total/NA	Water	Ext_Chrom_LSC	
LCS 160-530499/2-A	Lab Control Sample	Total/NA	Water	Ext_Chrom_LSC	
160-43375-J-2-B DU	Duplicate	Total/NA	Water	Ext_Chrom_LSC	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43229-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
160-43229-1	Rinsate-082621	92.1
500-204225-K-12-A DU	Duplicate	90.0
LCS 160-525242/1-A	Lab Control Sample	74.9
MB 160-525242/25-A	Method Blank	85.4

Tracer/Carrier Legend

Ba = Ba

Method: 905 - Strontium-90 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43229-1	Rinsate-082621	88.0	93.8
LCS 160-530106/1-A	Lab Control Sample	82.3	89.7
MB 160-530106/21-A	Method Blank	82.8	89.7

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43229-1	Rinsate-082621	100
160-43229-1 DU	Rinsate-082621	107
LCS 160-526538/2-A	Lab Control Sample	88.4
MB 160-526538/1-A	Method Blank	99.4

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-43229-1	Rinsate-082621	87.6
160-43229-1 DU	Rinsate-082621	90.2
LCS 160-526595/2-A	Lab Control Sample	97.2
MB 160-526595/1-A	Method Blank	99.5

Tracer/Carrier Legend

U-232 = Uranium-232

Tracer/Carrier Summary

Client: FPM Remediations Inc
Job ID: 160-43229-1
Project/Site: BNL Decommissioning Project

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-43229-1	Rinsate-082621	101
160-43375-J-2-B DU	Duplicate	104
LCS 160-530499/2-A	Lab Control Sample	99.0
MB 160-530499/1-A	Method Blank	100

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43229-1	Rinsate-082621	100
160-43229-1 DU	Rinsate-082621	107
LCS 160-526596/2-A	Lab Control Sample	88.4
MB 160-526596/1-A	Method Blank	99.4

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

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ANALYTICAL REPORT

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

Laboratory Job ID: 160-43375-1
Client Project/Site: BNL Decommissioning Project

For:
FPM Remediations Inc
181 Kenwood Ave
Oneida, New York 13421

Attn: Michael Grifasi

Authorized for release by:
10/15/2021 5:04:22 PM

Ivan Vania, Project Manager II
(314)298-8566
Ivan.Vania@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-43375-1

Laboratory: Eurofins TestAmerica, St. Louis

Narrative

CASE NARRATIVE

Client: FPM Remediations Inc

Project: BNL Decommissioning Project

Report Number: 160-43375-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, St. Louis attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an ""as received"" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

RECEIPT

The samples were received on 9/3/2021 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2º C, 2.1º C and 5.1º C.

Receipt Exceptions

Job ID: 160-43375-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

The samples in this job were submitted with those in job 160-43306-1, but were not listed on that COC. The client sent a revised COC that included the samples for both jobs.

TOTAL METALS (ICP/MS)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared and analyzed on 09/16/2021.

For ICPMS Metals, a 2X dilution was performed. This is a standard dilution that is performed by TestAmerica St. Louis on all samples analyzed by method SW-846 6020A. The dilution is performed in order to have the matrix of the samples (i.e. the concentration of acids) match the matrix of the standards used for calibration and instrument quality control purposes. The MDL studies analyzed by this method undergo the same 2X dilution, and all detection limits are based on this. As such, MDL's and RL's are not affected by the dilution.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

MERCURY (CVAA)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Mercury (CVAA) in accordance with EPA SW-846 Method 7470A. The samples were prepared and analyzed on 09/24/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 (GFPC)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 09/14/2021 and analyzed on 10/15/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

STRONTIUM-90 (GFPC)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Strontium-90 (GFPC) in accordance with EPA 905.0. The samples were prepared on 09/23/2021 and analyzed on 10/07/2021.

Preparation Batch 160-528678:
Insufficient sample volume was available to prepare a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRITIUM, TOTAL (LSC)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Tritium, Total (LSC) in accordance with USEPA 906.0. The samples were prepared on 09/28/2021 and analyzed on 10/01/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

AMERICIUM 241 (ALPHA SPECTROMETRY)
Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Americium 241 (Alpha Spectrometry) in accordance with A_01R. The samples were prepared on 09/13/2021 and analyzed on 09/24/2021.

Preparation Batch 160-526831
Insufficient sample volume was available to prepare a sample duplicate: A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2).

The following samples exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected: Rinseate - 090221 (160-43375-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 160-43375-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

ISOTOPIC PLUTONIUM (ALPHA SPECTROMETRY)

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Isotopic Plutonium (Alpha Spectrometry) in accordance with USDOE. The samples were prepared on 09/13/2021 and analyzed on 09/24/2021.

Preparation Batch 160-526833:
Insufficient sample volume was available to prepare a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2).

The method blank had less than 400 tracer counts. However, the FWHM keV was <100, the Peak Diff keV was <50, the method blank met the detection goal, the z-score was <3, and the tracer recovery was within QC limits. This demonstrates method performance and supports confidence in the results: (MB 160-526833/1-A).

Preparation Batch 160-526836:
Insufficient sample volume was available to prepare a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ISOTOPIC URANIUM (ALPHA SPECTROMETRY)

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Isotopic Uranium (Alpha Spectrometry) in accordance with DOE. The samples were prepared on 09/13/2021 and analyzed on 09/24/2021.

Preparation Batch 160-526835:
Insufficient sample volume was available to prepare a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared to demonstrate batch precision: Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CARBON-14 BY LSC

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Carbon-14 by LSC in accordance with EERF. The samples were prepared on 09/28/2021 and analyzed on 09/29/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226 & OTHER GAMMA EMITTERS (GS)-21 DAY INGROWTH

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Radium-226 & other gamma emitters (GS)-21 day ingrowth in accordance with GA-01-R. The samples were prepared on 09/13/2021 and analyzed on 10/04/2021 and 10/11/2021.

Preparation Batch 160-526684:
The Ra-228 MDC (66.7 pCi/L) for the method blank (MB) is above the requested limit of 50 pCi/L. Ra-228 activity was not observed in the method blank above the MDC or RL. The MDC for the samples was not less than the requested limit. The data was reported with the MDC's achieved: (MB 160-526684/1-A).

The MB z-score for Pb-214 does not meet QC criteria. This appears to be random in nature, and limited deviations such as this are statistically expected when larger analyte lists are reported. Such excursions are often caused by fluctuations in Compton background, force-fitting of peaks that are not found by the software peak-search algorithm, and inclusion of inferior peak results by the software in weighted averages. The laboratory SOP allows for such statistical exceedances: (MB 160-526684/1-A).

The detection goal of 50.0 pCi/L was not met for Ra-226/Ra-228 for the following sample. An elevated MDC can occur when higher background counts are applied to a peak ROI. This is due to the relatively small size of the peak or subsequent “force-fit” of the non-existent peak which resulted in higher than normal background counts due to statistical fluctuations in the Compton background. The laboratory does not believe this adversely affects the data, as the Ra-226/Ra-228 result is below the RL and MDC: Rinseate - 090221 (160-43375-2) and (160-43375-C-2-B DU).

Job ID: 160-43375-1 (Continued)

Laboratory: Eurofins TestAmerica, St. Louis (Continued)

For samples Rinseate - 082821 (160-43375-1), Rinseate - 090221 (160-43375-2), (LCS 160-526684/2-A), (MB 160-526684/1-A), and (160-43375-C-2-B DU) many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

Inferred From Nuclide	Reported to Nuclide
Th-234	Pa-234
Th-234	U-238
Pb-210	Po-210
Pb-210	Bi-210
Cs-137	Ba-137m
Po-216	Pb-212
Xe-131m	Xe-131
Sb-125	Te-125m
Ag-108m	Ag-108
Rh-106	Ru-106
Pb-212	Th-228
Pb-212	Ra-224
U-235	Th-231
Ac-228	Th-232
Ac-228	Ra-228
Th-227	Ra-223
Th-227	Ac-227
Th-227	Bi-214
Th-227	Pb-211
Bi-214	Ra-226

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NICKEL 59/63

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Nickel 59/63 in accordance with LSC-Nickel. The samples were prepared on 10/07/2021 and analyzed on 10/10/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PLUTONIUM 241

Samples Rinseate - 082821 (160-43375-1) and Rinseate - 090221 (160-43375-2) were analyzed for Plutonium 241 in accordance with LSC-Pu241. The samples were prepared on 09/13/2021 and analyzed on 09/30/2021.

Preparation Batch 160-526836:
While the method blank ((MB 160-526836/1-A)) did not meet the requested limit (RL), the associated sample was non-detect for Plutonium-241. In addition, the tracer recovery was low but within acceptance criteria, which elevated the MDC. The laboratory does not believe this excursion to have any adverse impact on the data and the results were reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Dan Ours**		COC No:
FPM	Email: d.ours@fpm-remediations.com	**Site Contact: Doug Beard**	**Date: 09-02-21**	___1___ of ___1___ COCs
Address 181 Kenwood Avenue	**Tel/Fax: (315) 336-7721 ext. 218**	**Lab Contact: Ivan Vania**	**Carrier: Fed Ex**	TALS Project #:
Oneida, NY 13421	**Analysis Turnaround Time**			Sampler: W. Fillingame
(315) 336-7721 ext. 218 Phone	☑ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			
P O # 1085-20-01-01	☐ 2 days			Job / SDG No.:
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+detects	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-171-082821	28-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 1
FSS-172-082821	28-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 2
FSS-173-082821	28-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 05
FSS-174-082821	28-Aug	12:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 04
FSS-175-082821	28-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 03
FSS-176-082821	28-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 02
FSS-177-082821	28-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 01
FSS-178-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 0-6"
FSS-179-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 6"-12"
FSS-180-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 18"-24"

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by: Douglas Beard	Company: Cabrera Services,Inc.	Date/Time:9-02-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: FED EX	Company:	Date/Time:	Received by:	Company: CIA SW	Date/Time: 9/3/21 0900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

160-43306 Chain of Custody

Eurofins TestAmerica, St. Louis
13715 Rider Trail North

Earth City, MO 63045-1205
phone 314.298.8566 fax 314.298.8757

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☑Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	Project Manager: Dan Ours	Site Contact: Doug Beard	Date: 09-02-21	COC No:
FPM	Email: d.ours@fpm-remediations.com	Lab Contact: Ivan Vania	Carrier: Fed Ex	1 of 1 COCs
Address 181 Kenwood Avenue	Tel/Fax: (315) 336-7721 ext. 218			TALS Project #:
Oneida, NY 13421	Analysis Turnaround Time			Sampler: W. Fillingame
(315) 336-7721 ext. 218 Phone	☑CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
Fax (315) 336-7722 FAX	TAT if different from Below 30 Days			Walk-in Client:
Project Name: BNL 705 Stack Demo	☐ 2 weeks			Lab Sampling:
Site: BNL	☐ 1 week			Job / SDG No.:
P O # 1085-20-01-01	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Gamma Spec: Ra-226+daughts	Strontium-90 (GFPC)	Asbestos - EPA600 R-93	Lead (ICP/MS) - 6020B	Mercurey - EPA 7470A	Ni-63	Tritium	C-14	Alpha Spec Pu 238,239,240	Alpha Spec U 234,235,238	Pu 241 by LSC	Sample Specific Notes:
FSS-171-082821	28-Aug	9:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 1
FSS-172-082821	28-Aug	10:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - Bias 2
FSS-173-082821	28-Aug	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 05
FSS-174-082821	28-Aug	12:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 04
FSS-175-082821	28-Aug	13:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 03
FSS-176-082821	28-Aug	13:30	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 02
FSS-177-082821	28-Aug	14:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7A - 01
FSS-178-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 0-6"
FSS-179-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 6"-12"
FSS-180-090221	2-Sep	11:00	C	S	3	N	N	1	1	1	1	1	1	1	1	1	1	1	SU7D-Bias 2 18"-24"
Rinseate - 082821	28-Aug	17:30	C	W	10	N	N	1	1	1	1	1	1	1	1	1	1	1	Rinseate
Rinseate - 090221	2-Sep	17:00	C	W	10	N	N	1	1	1	1	1	1	1	1	1	1	1	Rinseate

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐Return to Client ☐Disposal by Lab ☐Archive for Months

Special Instructions/QC Requirements & Comments: Gamma Spec results must include Cs-137, Ra-226, Bi-214, Pb-214, Ac-228, Bi-212, Pb-212, and K-40, Am241,Co60,Na22,Zn65,Th 232, Eu152,Eu154,Eu155

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____		Therm ID No.: _____
Relinquished by: Douglas Beard	Company: Cabrera Services Inc.	Date/Time:9-02-21/17:00	Received by:Fed Ex	Company:	Date/Time:
Relinquished by: Fed Ex	Company:	Date/Time:	Received by: Revised COC	Company: ETA	Date/Time: 9/2/21 13:50
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Eurofins TestAmerica, St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: 314-298-8566 Fax: 314-298-8757

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Vania, Ivan H	Carrier Tracking No(s):	COC No: 160-218994.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Ivan.Vania@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA, DoD ANAB; NELAP New York		Job #: 160-43375-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/7/2021			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: BNL Decommissioning Project	Project #: 16009147			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A HCL M Hexane
B NaOH N None
C Zn Acetate O AsNaO2
D Nitric Acid P Na2O4S
E NaHSO4 Q Na2SO3
F MeOH R Na2S2O3
G Amchlor S H2SO4
H Ascorbic Acid T TSP Dodecahydrate
I Ice U Acetone
J DI Water V MCAA
K EDTA W pH 4-5
L EDA Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A_DOD5/3020A Metals (ICP/MS) Pb Only	7470A_DOD5/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Rinseate 082821 (160-43375-1)	8/28/21	17:30 Eastern		Water			X	X	1	
Rinseate 090221 (160-43375-2)	9/2/21	17:00 Eastern		Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Micha Konninger	SEP 13 2021 17:00	ETA SL		9/14/21 0930	ETA DEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ✓ Yes △ No	Custody Seal No. NA	Cooler Temperature(s) °C and Other Remarks: 3 IR11 CFT10

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43375-1

Login Number: 43375
List Number: 1
Creator: Vania, Ivan H

List Source: Eurofins TestAmerica, St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: FPM Remediations Inc

Job Number: 160-43375-1

Login Number: 43375
List Number: 2
Creator: Rystrom, Joshua R

List Source: Eurofins TestAmerica, Denver
List Creation: 09/14/21 04:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: FPM Remediations Inc
Job ID: 160-43375-1
Project/Site: BNL Decommissioning Project

Qualifiers

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Rad

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
903.0	Radium-226 (GFPC)	EPA	TAL SL
905	Strontium-90 (GFPC)	EPA	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
A-01-R	Isotopic Curium and/or Americium 241 (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Plutonium (Alpha Spectrometry)	DOE	TAL SL
A-01-R	Isotopic Uranium (Alpha Spectrometry)	DOE	TAL SL
C-01-1	Carbon-14 (EERF C-01-1)	EERF	TAL SL
GA-01-R	Radium-226 & Other Gamma Emitters (GS)	DOE	TAL SL
ST-RC-0055	Nickel-59/Nickel-63 (LSC)	TAL-STL	TAL SL
ST-RC-0245	Plutonium-241 (LSC)	TAL-STL	TAL SL
3020A	Preparation, Total Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
Ext_Chrom_LSC	Preparation, Extraction Chromatography	None	TAL SL
ExtChrom	Preparation, Extraction Chromatography Resin Actinide Separation	None	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL
Leach_Precip	Preparation, Leachate/Precipitation	None	TAL SL
LSC_Dist_Susp	Distillation and Suspension (LSC)	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL
PrecSep-7	Preparation, Precipitate Separation (7-Day In-Growth)	None	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EERF = EERF
EPA = US Environmental Protection Agency
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-43375-1	Rinseate - 082821	Water	08/28/21 17:30	09/03/21 09:00
160-43375-2	Rinseate - 090221	Water	09/02/21 17:00	09/03/21 09:00

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Client Sample ID: Rinseate - 082821

Date Collected: 08/28/21 17:30
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43375-1

Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		09/16/21 07:48	09/16/21 19:40	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.027	ug/L		09/24/21 14:40	09/24/21 20:21	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.266	U	0.209	0.210	1.00	0.322	pCi/L	09/14/21 09:45	10/15/21 09:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba	*95.7*		*40 - 110*	*09/14/21 09:45*	*10/15/21 09:41*	*1*

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0508	U	0.159	0.159	3.00	0.280	pCi/L	09/23/21 15:41	10/07/21 21:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*87.7*		*40 - 110*	*09/23/21 15:41*	*10/07/21 21:14*	*1*
Y Carrier	*101*		*40 - 110*	*09/23/21 15:41*	*10/07/21 21:14*	*1*

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	38.3	U	158	158	500	286	pCi/L	09/28/21 11:14	10/01/21 19:57	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.0158	U	0.0905	0.0905	1.00	0.190	pCi/L	09/13/21 17:32	09/24/21 12:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*88.1*		*30 - 110*	*09/13/21 17:32*	*09/24/21 12:09*	*1*

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	-0.00393	U	0.0353	0.0353	1.00	0.112	pCi/L	09/13/21 17:32	09/24/21 11:17	1
Plutonium-239/240	0.00393	U	0.0336	0.0336	1.00	0.0973	pCi/L	09/13/21 17:32	09/24/21 11:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*93.6*		*30 - 110*	*09/13/21 17:32*	*09/24/21 11:17*	*1*

Client Sample Results

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Client Sample ID: Rinseate - 082821

Date Collected: 08/28/21 17:30
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43375-1

Matrix: Water

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0764	U	0.0977	0.0979	1.00	0.164	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-235	-0.00559	U	0.0110	0.0110	1.00	0.108	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-238	-0.00897	U	0.0124	0.0125	1.00	0.100	pCi/L	09/13/21 17:32	09/24/21 11:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*87.0*		*30 - 110*	*09/13/21 17:32*	*09/24/21 11:53*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	0.839	U	7.36	7.36	20.0	12.7	pCi/L	09/28/21 09:03	09/29/21 17:59	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	16.5	U	29.2	29.2		50.0	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Americium-241	-5.98	U	23.8	23.8		40.8	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Bismuth-212	64.9	U	119	119		206	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Bismuth-214	**45.9**		25.6	26.1		39.4	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Cesium-137	5.64	U	9.66	9.69	20.0	16.7	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Cobalt-60	5.18	U	6.63	6.66		11.4	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Europium-152	-4.68	U	8.29	8.31		45.0	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Europium-154	27.8	U	13.8	14.2		28.1	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Europium-155	5.49	U	18.2	18.2		88.5	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Lead-212	-13.0	U	13.6	13.7		42.3	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Lead-214	23.0	U	14.7	15.0		24.6	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Potassium-40	59.2	U	146	146		162	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Radium-226	**45.9**		25.6	26.1	50.0	39.4	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Radium-228	16.5	U	29.2	29.2	50.0	50.0	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Sodium-22	7.53	U	10.3	10.3		17.4	pCi/L	09/13/21 12:23	10/04/21 21:52	1
Zinc-65	-0.158	U	26.8	26.8		48.6	pCi/L	09/13/21 12:23	10/04/21 21:52	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.774	U	1.41	1.41	5.00	2.46	pCi/L	10/07/21 12:39	10/10/21 17:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*103*		*40 - 110*	*10/07/21 12:39*	*10/10/21 17:49*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.14	U	2.55	2.56	5.00	4.80	pCi/L	09/13/21 17:32	09/30/21 16:13	1

Client Sample ID: Rinseate - 082821

Lab Sample ID: 160-43375-1
Matrix: Water
Date Collected: 08/28/21 17:30
Date Received: 09/03/21 09:00

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	93.6		30 - 110	09/13/21 17:32	09/30/21 16:13	1

Client Sample ID: Rinseate - 090221

Lab Sample ID: 160-43375-2
Matrix: Water
Date Collected: 09/02/21 17:00
Date Received: 09/03/21 09:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		09/16/21 07:48	09/16/21 19:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.027	ug/L		09/24/21 14:40	09/24/21 20:24	1

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.217	U	0.224	0.225	1.00	0.369	pCi/L	09/14/21 09:45	10/15/21 09:41	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba	89.8		40 - 110	09/14/21 09:45	10/15/21 09:41	1

Method: 905 - Strontium-90 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	0.0422	U	0.159	0.159	3.00	0.282	pCi/L	09/23/21 15:41	10/07/21 21:14	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Sr Carrier	88.7		40 - 110	09/23/21 15:41	10/07/21 21:14	1
Y Carrier	103		40 - 110	09/23/21 15:41	10/07/21 21:14	1

Method: 906.0 - Tritium, Total (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	66.7	U	160	160	500	282	pCi/L	09/28/21 11:14	10/01/21 20:20	1

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	-0.0595	U	0.0323	0.0330	1.00	0.176	pCi/L	09/13/21 17:32	09/24/21 12:09	1

Tracer	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Americium-243	81.0		30 - 110	09/13/21 17:32	09/24/21 12:09	1

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.0540	U	0.0614	0.0616	1.00	0.0865	pCi/L	09/13/21 17:32	09/24/21 11:17	1

Client Sample ID: Rinseate - 090221

Date Collected: 09/02/21 17:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43375-2

Matrix: Water

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry) (Continued)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-239/240	0.00386	U	0.0473	0.0473	1.00	0.122	pCi/L	09/13/21 17:32	09/24/21 11:17	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*109*		*30 - 110*	*09/13/21 17:32*	*09/24/21 11:17*	*1*

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.0472	U	0.0588	0.0590	1.00	0.0830	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-235	0.000	U	0.0105	0.0105	1.00	0.0640	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-238	0.00428	U	0.0366	0.0366	1.00	0.106	pCi/L	09/13/21 17:32	09/24/21 11:53	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.1*		*30 - 110*	*09/13/21 17:32*	*09/24/21 11:53*	*1*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	2.10	U	7.47	7.47	20.0	12.8	pCi/L	09/28/21 09:03	09/29/21 19:05	1

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	0.000	U	18.4	18.4		57.5	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Americium-241	7.68	U	20.7	20.7		35.4	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Bismuth-212	-2.39	U	125	125		229	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Bismuth-214	18.0	U	8.81	9.05		60.4	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Cesium-137	-3.91	U	9.33	9.34	20.0	16.4	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Cobalt-60	5.44	U	9.37	9.39		10.7	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Europium-152	1.08	U	1.60	1.60		38.2	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Europium-154	9.50	U	19.7	19.7		22.9	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Europium-155	0.000	U	15.4	15.4		68.2	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Lead-212	6.55	U	11.1	11.1		16.2	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Lead-214	-5.98	U	18.3	18.3		32.6	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Potassium-40	0.000	U	64.1	64.1		157	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Radium-226	18.0	U	8.81	9.05	50.0	60.4	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Radium-228	0.000	U	18.4	18.4	50.0	57.5	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Sodium-22	5.44	U	7.08	7.11		11.9	pCi/L	09/13/21 12:23	10/11/21 16:16	1
Zinc-65	0.000	U	3.38	3.38		30.6	pCi/L	09/13/21 12:23	10/11/21 16:16	1

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	0.826	U	1.39	1.39	5.00	2.43	pCi/L	10/07/21 12:39	10/10/21 18:56	1

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Client Sample ID: Rinseate - 090221
Date Collected: 09/02/21 17:00
Date Received: 09/03/21 09:00

Lab Sample ID: 160-43375-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*104*		*40 - 110*	*10/07/21 12:39*	*10/10/21 18:56*	*1*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Analyte	Result	Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-0.660	U	2.27	2.27	5.00	4.12	pCi/L	09/13/21 17:32	09/30/21 17:03	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*109*		*30 - 110*	*09/13/21 17:32*	*09/30/21 17:03*	*1*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-549855/1-A
Matrix: Water
Analysis Batch: 550156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549855

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.70	U	3.0	0.18	ug/L		09/16/21 07:48	09/16/21 19:32	1

Lab Sample ID: LCS 280-549855/2-A
Matrix: Water
Analysis Batch: 550156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549855

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	38.1		ug/L		95	88 - 115

Lab Sample ID: 160-43375-1 MS
Matrix: Water
Analysis Batch: 550156

Client Sample ID: Rinseate - 082821
Prep Type: Total/NA
Prep Batch: 549855

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.70	U	40.0	36.9		ug/L		92	88 - 115

Lab Sample ID: 160-43375-1 MSD
Matrix: Water
Analysis Batch: 550156

Client Sample ID: Rinseate - 082821
Prep Type: Total/NA
Prep Batch: 549855

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.70	U	40.0	38.2		ug/L		96	88 - 115	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-550731/1-A
Matrix: Water
Analysis Batch: 551215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 550731

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.027	ug/L		09/24/21 14:40	09/24/21 19:55	1

Lab Sample ID: LCS 280-550731/2-A
Matrix: Water
Analysis Batch: 551215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 550731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.90		ug/L		98	82 - 119

Lab Sample ID: 280-153028-H-1-E MS
Matrix: Water
Analysis Batch: 551215

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 550731

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	3.1		5.00	7.43		ug/L		87	82 - 119

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 280-153028-H-1-F MSD
Matrix: Water
Analysis Batch: 551215

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 550731

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	3.1		5.00	7.15		ug/L		82	82 - 119	4	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-526912/24-A
Matrix: Water
Analysis Batch: 531971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526912

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1969	U	0.262	0.263	1.00	0.449	pCi/L	09/14/21 09:45	10/15/21 09:43	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba	*74.4*		*40 - 110*	*09/14/21 09:45*	*10/15/21 09:43*	*1*

Lab Sample ID: LCS 160-526912/1-A
Matrix: Water
Analysis Batch: 531983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526912

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.71		1.27	1.00	0.331	pCi/L	94	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba	*93.1*		*40 - 110*

Lab Sample ID: 480-189324-A-7-B MSD
Matrix: Water
Analysis Batch: 531971

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 526912

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Radium-226	0.736		11.3	13.32		1.58	1.00	0.404	pCi/L	111	75 - 138	2.67	3

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba	*81.8*		*40 - 110*

Lab Sample ID: 480-189324-B-7-A MS
Matrix: Water
Analysis Batch: 531971

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 526912

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Radium-226	0.736		11.3	10.55		1.28	1.00	0.332	pCi/L	87	75 - 138		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba	*87.5*		*40 - 110*

Method: 905 - Strontium-90 (GFPC)

Lab Sample ID: MB 160-528678/23-A
Matrix: Water
Analysis Batch: 530481

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 528678

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium-90	-0.08767	U	0.127	0.127	3.00	0.249	pCi/L	09/23/21 15:41	10/07/21 21:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*88.6*		*40 - 110*	*09/23/21 15:41*	*10/07/21 21:08*	*1*
Y Carrier	*99.8*		*40 - 110*	*09/23/21 15:41*	*10/07/21 21:08*	*1*

Lab Sample ID: LCS 160-528678/1-A
Matrix: Water
Analysis Batch: 530476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 528678

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Strontium-90			7.61	6.714		0.694	3.00	0.225	pCi/L	88	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*88.4*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Lab Sample ID: LCSD 160-528678/2-A
Matrix: Water
Analysis Batch: 530476

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 528678

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Strontium-90			7.61	6.693		0.687	3.00	0.227	pCi/L	88	75 - 125	0.04	3

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Sr Carrier	*93.0*		*40 - 110*
Y Carrier	*101*		*40 - 110*

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-529145/1-A
Matrix: Water
Analysis Batch: 529865

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529145

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	71.62	U	162	162	500	286	pCi/L	09/28/21 11:14	10/01/21 14:18	1

Lab Sample ID: LCS 160-529145/2-A
Matrix: Water
Analysis Batch: 529865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529145

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Tritium			2280	2563		408	500	286	pCi/L	112	75 - 114		

Method: 906.0 - Tritium, Total (LSC) (Continued)

Lab Sample ID: 160-43354-C-1-B MS
Matrix: Water
Analysis Batch: 529865

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 529145

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Tritium	98.2	U	2270	1991		352	500	282	pCi/L	83	67 - 130

Lab Sample ID: 160-43367-C-1-B DU
Matrix: Water
Analysis Batch: 529865

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 529145

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Tritium	79.7	U	63.06	U	162	500	288	pCi/L	0.14	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Lab Sample ID: MB 160-526835/1-A
Matrix: Water
Analysis Batch: 528767

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526835

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Uranium-233/234	0.06943	U	0.0790	0.0792	1.00	0.111	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-235	0.01851	U	0.0499	0.0499	1.00	0.119	pCi/L	09/13/21 17:32	09/24/21 11:53	1
Uranium-238	0.01980	U	0.0388	0.0388	1.00	0.0594	pCi/L	09/13/21 17:32	09/24/21 11:53	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Uranium-232	*77.4*		*30 - 110*	*09/13/21 17:32*	*09/24/21 11:53*	*1*

Lab Sample ID: LCS 160-526835/2-A
Matrix: Water
Analysis Batch: 528768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526835

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Uranium-233/234	12.7	13.00		1.44	1.00	0.115	pCi/L	102	75 - 125
Uranium-238	13.0	13.27		1.46	1.00	0.0556	pCi/L	102	75 - 125

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Uranium-232	*85.8*		*30 - 110*

Lab Sample ID: LCSD 160-526835/3-A
Matrix: Water
Analysis Batch: 528769

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 526835

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Uranium-233/234	12.7	12.12		1.37	1.00	0.161	pCi/L	95	75 - 125	0.87	3
Uranium-238	13.0	13.05		1.45	1.00	0.106	pCi/L	100	75 - 125	0.21	3

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry) (Continued)

Lab Sample ID: LCSD 160-526835/3-A
Matrix: Water
Analysis Batch: 528769

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 526835

Tracer	LCSD %Yield	LCSD Qualifier	Limits
Uranium-232	86.6		30 - 110

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Lab Sample ID: MB 160-526833/1-A
Matrix: Water
Analysis Batch: 528744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526833

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-238	0.07106	U	0.200	0.200	1.00	0.418	pCi/L	09/13/21 17:32	09/24/21 11:17	1
Plutonium-239/240	0.07113	U	0.171	0.171	1.00	0.356	pCi/L	09/13/21 17:32	09/24/21 11:17	1

Tracer	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pu-242 (T)	33.5		30 - 110	09/13/21 17:32	09/24/21 11:17	1

Lab Sample ID: LCS 160-526833/2-A
Matrix: Water
Analysis Batch: 528745

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526833

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-238			10.4	10.31		1.20	1.00	0.207	pCi/L	99	79 - 115		
Plutonium-239/240			10.6	10.74		1.24	1.00	0.154	pCi/L	102	85 - 120		

Tracer	LCS %Yield	LCS Qualifier	Limits
Pu-242 (T)	92.5		30 - 110

Lab Sample ID: LCSD 160-526833/3-A
Matrix: Water
Analysis Batch: 528746

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 526833

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Plutonium-238			10.4	10.61		1.23	1.00	0.136	pCi/L	102	79 - 115	0.34	3
Plutonium-239/240			10.6	11.34		1.29	1.00	0.0881	pCi/L	107	85 - 120	0.65	3

Tracer	LCSD %Yield	LCSD Qualifier	Limits
Pu-242 (T)	94.2		30 - 110

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Lab Sample ID: MB 160-526831/1-A
Matrix: Water
Analysis Batch: 528825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526831

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Americium-241	0.03358	U	0.0803	0.0804	1.00	0.163	pCi/L	09/13/21 17:32	09/24/21 12:09	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Americium-243	*71.4*		*30 - 110*	*09/13/21 17:32*	*09/24/21 12:09*	*1*

Lab Sample ID: LCS 160-526831/2-A
Matrix: Water
Analysis Batch: 528826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526831

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Americium-241			7.40	8.077		1.12	1.00	0.138	pCi/L	109	80 - 116		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Americium-243	*93.4*		*30 - 110*

Lab Sample ID: LCSD 160-526831/3-A
Matrix: Water
Analysis Batch: 528827

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 526831

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Americium-241			7.40	7.994		1.12	1.00	0.170	pCi/L	108	80 - 116	0.10	3

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Americium-243	*88.1*		*30 - 110*

Method: C-01-1 - Carbon-14 (EERF C-01-1)

Lab Sample ID: MB 160-529125/1-A
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529125

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Carbon-14	6.426	U	7.73	7.76	20.0	13.1	pCi/L	09/28/21 09:03	09/29/21 11:22	1

Lab Sample ID: LCS 160-529125/2-A
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529125

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Carbon-14			1120	1040		113	20.0	12.7	pCi/L	92	75 - 125		

Method: C-01-1 - Carbon-14 (EERF C-01-1) (Continued)

Lab Sample ID: 160-43229-C-1-C MS
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 529125

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Carbon-14	6.24	U	1120	1051		114	20.0	12.8	pCi/L	93	37 - 121

Lab Sample ID: 160-43229-C-1-B DU
Matrix: Water
Analysis Batch: 529511

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 529125

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Carbon-14	6.24	U	5.766	U	7.63	20.0	12.8	pCi/L	0.09	3

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-526684/1-A
Matrix: Water
Analysis Batch: 530116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526684

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Actinium-228	-37.44	U	28.5	28.8		66.7	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Americium-241	5.853	U	17.4	17.4		29.9	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Bismuth-212	-3.813	U	262	262		460	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Bismuth-214	-8.225	U	26.7	26.7		47.1	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Cesium-137	-1.145	U	9.74	9.74	20.0	12.2	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Cobalt-60	7.215		4.96	5.02		6.01	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Europium-152	17.12	U	31.5	31.5		35.3	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Europium-154	8.080	U	13.3	13.3		21.0	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Europium-155	5.048	U	16.5	16.5		80.5	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Lead-212	-9.592	U	18.6	18.6		34.3	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Lead-214	-24.11	U	13.5	13.8		43.4	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Potassium-40	54.05	U	90.0	90.2		102	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Radium-226	-8.225	U	26.7	26.7	50.0	47.1	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Radium-228	-37.44	U	28.5	28.8	50.0	66.7	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Sodium-22	6.233	U	7.57	7.60		12.5	pCi/L	09/13/21 12:23	10/05/21 14:03	1
Zinc-65	0.0000	U	2.52	2.52		34.6	pCi/L	09/13/21 12:23	10/05/21 14:03	1

Lab Sample ID: LCS 160-526684/2-A
Matrix: Water
Analysis Batch: 530119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526684

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Americium-241	135000	141500		16300		447	pCi/L	104	86 - 111
Cesium-137	42300	43000		4960	20.0	125	pCi/L	102	90 - 110
Cobalt-60	21600	22210		2570		95.7	pCi/L	103	89 - 110

Method: GA-01-R - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 160-43375-2 DU
Matrix: Water
Analysis Batch: 530640

Client Sample ID: Rinseate - 090221
Prep Type: Total/NA
Prep Batch: 526684

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	DER	DER Limit
Actinium-228	0.000	U	1.481	U	4.75		56.2	pCi/L	0.15	3
Americium-241	7.68	U	7.346	U	22.0		37.7	pCi/L	0.02	3
Bismuth-212	-2.39	U	-13.10	U	108		198	pCi/L	0.13	3
Bismuth-214	18.0	U	-12.41	U	35.1		61.8	pCi/L	1.64	3
Cesium-137	-3.91	U	3.022	U	7.48	20.0	13.2	pCi/L	1.14	3
Cobalt-60	5.44	U	-6.463	U	8.48		16.3	pCi/L	1.84	3
Europium-152	1.08	U	13.13	U	14.5		41.0	pCi/L	1.62	3
Europium-154	9.50	U	13.82	U	18.8		25.7	pCi/L	0.31	3
Europium-155	0.000	U	-5.123	U	13.6		67.6	pCi/L	0.49	3
Lead-212	6.55	U	-16.28	U	16.7		37.8	pCi/L	2.23	3
Lead-214	-5.98	U	-4.145	U	18.6		32.9	pCi/L	0.14	3
Potassium-40	0.000	U	-2.076	U	105		163	pCi/L	0.03	3
Radium-226	18.0	U	-12.41	U	35.1	50.0	61.8	pCi/L	1.64	3
Radium-228	0.000	U	1.481	U	4.75	50.0	56.2	pCi/L	0.15	3
Sodium-22	5.44	U	-3.611	U	11.2		20.2	pCi/L	1.34	3
Zinc-65	0.000	U	6.497	U	18.8		33.4	pCi/L	0.67	3

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Lab Sample ID: MB 160-530499/1-A
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530499

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Nickel-63	1.396	U	1.49	1.50	5.00	2.57	pCi/L	10/07/21 12:39	10/10/21 14:31	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ni	*100*		*40 - 110*	*10/07/21 12:39*	*10/10/21 14:31*	*1*

Lab Sample ID: LCS 160-530499/2-A
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530499

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits
Nickel-63	38.7	36.78		4.61	5.00	2.55	pCi/L	95	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ni	*99.0*		*40 - 110*

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC) (Continued)

Lab Sample ID: 160-43375-2 DU
Matrix: Water
Analysis Batch: 530617

Client Sample ID: Rinseate - 090221
Prep Type: Total/NA
Prep Batch: 530499

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit			DER	DER Limit
Nickel-63	0.826	U		2.104	U	1.49	5.00	2.49	pCi/L			1.23	3

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ni	*104*		*40 - 110*

Method: ST-RC-0245 - Plutonium-241 (LSC)

Lab Sample ID: MB 160-526836/1-A
Matrix: Water
Analysis Batch: 529696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526836

Analyte	MB Result	MB Qualifier	Count Uncert. (1.96σ+/-)	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	Prepared	Analyzed	Dil Fac
Plutonium-241	-2.151	U	7.68	7.68	5.00	14.1	pCi/L	09/13/21 17:32	09/30/21 13:43	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Pu-242 (T)	*33.5*		*30 - 110*	*09/13/21 17:32*	*09/30/21 13:43*	*1*

Lab Sample ID: LCS 160-526836/2-A
Matrix: Water
Analysis Batch: 529696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526836

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits		
Plutonium-241			39.7	41.49		5.94	5.00	4.94	pCi/L	105	77 - 115		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Pu-242 (T)	*92.5*		*30 - 110*

Lab Sample ID: LCSD 160-526836/3-A
Matrix: Water
Analysis Batch: 529696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 526836

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (1.96σ+/-)	LOQ	MDC	Unit	%Rec	%Rec. Limits	DER	DER Limit
Plutonium-241			39.7	38.83		5.62	5.00	4.74	pCi/L	98	77 - 115	0.64	3

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Pu-242 (T)	*94.2*		*30 - 110*

Metals

Prep Batch: 549855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	3020A	
160-43375-2	Rinseate - 090221	Total/NA	Water	3020A	
MB 280-549855/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-549855/2-A	Lab Control Sample	Total/NA	Water	3020A	
160-43375-1 MS	Rinseate - 082821	Total/NA	Water	3020A	
160-43375-1 MSD	Rinseate - 082821	Total/NA	Water	3020A	

Analysis Batch: 550156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	6020A	549855
160-43375-2	Rinseate - 090221	Total/NA	Water	6020A	549855
MB 280-549855/1-A	Method Blank	Total/NA	Water	6020A	549855
LCS 280-549855/2-A	Lab Control Sample	Total/NA	Water	6020A	549855
160-43375-1 MS	Rinseate - 082821	Total/NA	Water	6020A	549855
160-43375-1 MSD	Rinseate - 082821	Total/NA	Water	6020A	549855

Prep Batch: 550731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	7470A	
160-43375-2	Rinseate - 090221	Total/NA	Water	7470A	
MB 280-550731/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-550731/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-153028-H-1-E MS	Matrix Spike	Total/NA	Water	7470A	
280-153028-H-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 551215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	7470A	550731
160-43375-2	Rinseate - 090221	Total/NA	Water	7470A	550731
MB 280-550731/1-A	Method Blank	Total/NA	Water	7470A	550731
LCS 280-550731/2-A	Lab Control Sample	Total/NA	Water	7470A	550731
280-153028-H-1-E MS	Matrix Spike	Total/NA	Water	7470A	550731
280-153028-H-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	550731

Rad

Prep Batch: 526684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	Fill_Geo-21	
160-43375-2	Rinseate - 090221	Total/NA	Water	Fill_Geo-21	
MB 160-526684/1-A	Method Blank	Total/NA	Water	Fill_Geo-21	
LCS 160-526684/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-21	
160-43375-2 DU	Rinseate - 090221	Total/NA	Water	Fill_Geo-21	

Prep Batch: 526831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	ExtChrom	
160-43375-2	Rinseate - 090221	Total/NA	Water	ExtChrom	
MB 160-526831/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-526831/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
LCSD 160-526831/3-A	Lab Control Sample Dup	Total/NA	Water	ExtChrom	

Rad

Prep Batch: 526833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	ExtChrom	
160-43375-2	Rinseate - 090221	Total/NA	Water	ExtChrom	
MB 160-526833/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-526833/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
LCSD 160-526833/3-A	Lab Control Sample Dup	Total/NA	Water	ExtChrom	

Prep Batch: 526835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	ExtChrom	
160-43375-2	Rinseate - 090221	Total/NA	Water	ExtChrom	
MB 160-526835/1-A	Method Blank	Total/NA	Water	ExtChrom	
LCS 160-526835/2-A	Lab Control Sample	Total/NA	Water	ExtChrom	
LCSD 160-526835/3-A	Lab Control Sample Dup	Total/NA	Water	ExtChrom	

Prep Batch: 526836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	Leach_Precip	
160-43375-2	Rinseate - 090221	Total/NA	Water	Leach_Precip	
MB 160-526836/1-A	Method Blank	Total/NA	Water	Leach_Precip	
LCS 160-526836/2-A	Lab Control Sample	Total/NA	Water	Leach_Precip	
LCSD 160-526836/3-A	Lab Control Sample Dup	Total/NA	Water	Leach_Precip	

Prep Batch: 526912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	PrecSep-21	
160-43375-2	Rinseate - 090221	Total/NA	Water	PrecSep-21	
MB 160-526912/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-526912/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
480-189324-A-7-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
480-189324-B-7-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	

Prep Batch: 528678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	PrecSep-7	
160-43375-2	Rinseate - 090221	Total/NA	Water	PrecSep-7	
MB 160-528678/23-A	Method Blank	Total/NA	Water	PrecSep-7	
LCS 160-528678/1-A	Lab Control Sample	Total/NA	Water	PrecSep-7	
LCSD 160-528678/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-7	

Prep Batch: 529125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	LSC_Dist_Susp	
160-43375-2	Rinseate - 090221	Total/NA	Water	LSC_Dist_Susp	
MB 160-529125/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-529125/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-43229-C-1-C MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-43229-C-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 529145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	LSC_Dist_Susp	

Rad (Continued)

Prep Batch: 529145 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-2	Rinseate - 090221	Total/NA	Water	LSC_Dist_Susp	
MB 160-529145/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-529145/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-43354-C-1-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-43367-C-1-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 530499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-43375-1	Rinseate - 082821	Total/NA	Water	Ext_Chrom_LSC	
160-43375-2	Rinseate - 090221	Total/NA	Water	Ext_Chrom_LSC	
MB 160-530499/1-A	Method Blank	Total/NA	Water	Ext_Chrom_LSC	
LCS 160-530499/2-A	Lab Control Sample	Total/NA	Water	Ext_Chrom_LSC	
160-43375-2 DU	Rinseate - 090221	Total/NA	Water	Ext_Chrom_LSC	

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
160-43375-1	Rinseate - 082821	95.7
160-43375-2	Rinseate - 090221	89.8
480-189324-A-7-B MSD	Matrix Spike Duplicate	81.8
480-189324-B-7-A MS	Matrix Spike	87.5
LCS 160-526912/1-A	Lab Control Sample	93.1
MB 160-526912/24-A	Method Blank	74.4

Tracer/Carrier Legend

Ba = Ba

Method: 905 - Strontium-90 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Sr (40-110)	Y (40-110)
160-43375-1	Rinseate - 082821	87.7	101
160-43375-2	Rinseate - 090221	88.7	103
LCS 160-528678/1-A	Lab Control Sample	88.4	101
LCSD 160-528678/2-A	Lab Control Sample Dup	93.0	101
MB 160-528678/23-A	Method Blank	88.6	99.8

Tracer/Carrier Legend

Sr = Sr Carrier
Y = Y Carrier

Method: A-01-R - Isotopic Curium and/or Americium 241 (Alpha Spectrometry)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Am-243 (30-110)
160-43375-1	Rinseate - 082821	88.1
160-43375-2	Rinseate - 090221	81.0
LCS 160-526831/2-A	Lab Control Sample	93.4
LCSD 160-526831/3-A	Lab Control Sample Dup	88.1
MB 160-526831/1-A	Method Blank	71.4

Tracer/Carrier Legend

Am-243 = Americium-243

Method: A-01-R - Isotopic Plutonium (Alpha Spectrometry)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43375-1	Rinseate - 082821	93.6
160-43375-2	Rinseate - 090221	109
LCS 160-526833/2-A	Lab Control Sample	92.5
LCSD 160-526833/3-A	Lab Control Sample Dup	94.2
MB 160-526833/1-A	Method Blank	33.5

Tracer/Carrier Summary

Client: FPM Remediations Inc
Project/Site: BNL Decommissioning Project

Job ID: 160-43375-1

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

Method: A-01-R - Isotopic Uranium (Alpha Spectrometry)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	U-232 (30-110)
160-43375-1	Rinseate - 082821	87.0
160-43375-2	Rinseate - 090221	77.1
LCS 160-526835/2-A	Lab Control Sample	85.8
LCSD 160-526835/3-A	Lab Control Sample Dup	86.6
MB 160-526835/1-A	Method Blank	77.4

Tracer/Carrier Legend

U-232 = Uranium-232

Method: ST-RC-0055 - Nickel-59/Nickel-63 (LSC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ni (40-110)
160-43375-1	Rinseate - 082821	103
160-43375-2	Rinseate - 090221	104
160-43375-2 DU	Rinseate - 090221	104
LCS 160-530499/2-A	Lab Control Sample	99.0
MB 160-530499/1-A	Method Blank	100

Tracer/Carrier Legend

Ni = Ni

Method: ST-RC-0245 - Plutonium-241 (LSC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Pu-242 (T) (30-110)
160-43375-1	Rinseate - 082821	93.6
160-43375-2	Rinseate - 090221	109
LCS 160-526836/2-A	Lab Control Sample	92.5
LCSD 160-526836/3-A	Lab Control Sample Dup	94.2
MB 160-526836/1-A	Method Blank	33.5

Tracer/Carrier Legend

Pu-242 (T) = Pu-242 (T)

eurofins | Environment Testing TestAmerica

December 2, 2021

Daniel P. Ours
FPM Remediations, Inc.
181 Kenwood Avenue
Oneida, NY 13421

Mr. Ours,

Eurofins TestAmerica is submitting a supplemental Excel EDD file for the following jobs to provide “U” flags at the Critical Value (Lc). Previously submitted reports and EDDs are “U” flagged at the Minimum Detectable Concentration (MDC).

FSSR Jobs:

160-41496-1
160-41700-1
160-43079-1
160-43079-2
160-43084-1
160-43113-1
160-43124-1
160-43154-1
160-43154-2
160-43157-1
160-43195-1
160-43195-2
160-43220-1
160-43230-1
160-43306-1

Contact Ivan Vania (Ivan.Vania@Eurofinset.com) or 314-787-8270 with any questions.

Regards,

Rhonda Ridenhower

Rhonda Ridenhower
Laboratory Director

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-41496-1	SAMP	RA-001-031721	Soil	Sr-90	pCi/g	0.120	0.157	0.158	1.96	0.122	U	0.268	U	200
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	Sr-90	pCi/g	-0.1014	0.15	0.15	1.96	0.135	U	0.294	U	200
160-41496-10	SAMP	RA-009-031721	Soil	Sr-90	pCi/g	0.0606	0.142	0.142	1.96	0.113	U	0.251	U	200
160-41496-11	SAMP	RA-010-031721	Soil	Sr-90	pCi/g	0.244	0.168	0.169	1.96	0.119		0.264	U	200
160-41496-12	SAMP	RA-011-031721	Soil	Sr-90	pCi/g	0.167	0.144	0.144	1.96	0.107		0.235	U	200
160-41496-13	SAMP	RA-211-031721	Soil	Sr-90	pCi/g	0.828	0.221	0.231	1.96	0.137		0.295		200
160-41496-14	SAMP	RA-012-031721	Soil	Sr-90	pCi/g	0.0314	0.135	0.135	1.96	0.111	U	0.245	U	200
160-41496-15	SAMP	RA-013-031721	Soil	Sr-90	pCi/g	0.152	0.171	0.171	1.96	0.132		0.287	U	200
160-41496-16	SAMP	RA-014-031721	Soil	Sr-90	pCi/g	0.217	0.146	0.147	1.96	0.103		0.228	U	200
160-41496-17	SAMP	RA-015-031721	Soil	Sr-90	pCi/g	0.0473	0.15	0.15	1.96	0.121	U	0.267	U	200
160-41496-18	SAMP	RA-016-031721	Soil	Sr-90	pCi/g	0.0426	0.137	0.137	1.96	0.111	U	0.244	U	200
160-41496-2	SAMP	RA-201-031721	Soil	Sr-90	pCi/g	0.211	0.182	0.183	1.96	0.137		0.298	U	200
160-41496-3	SAMP	RA-002-031721	Soil	Sr-90	pCi/g	0.195	0.152	0.153	1.96	0.111		0.244	U	200
160-41496-4	SAMP	RA-003-031721	Soil	Sr-90	pCi/g	0.131	0.152	0.152	1.96	0.117		0.255	U	200
160-41496-5	SAMP	RA-004-031721	Soil	Sr-90	pCi/g	0.109	0.152	0.152	1.96	0.118	U	0.259	U	200
160-41496-6	SAMP	RA-005-031721	Soil	Sr-90	pCi/g	0.136	0.158	0.159	1.96	0.121		0.267	U	200
160-41496-7	SAMP	RA-006-031721	Soil	Sr-90	pCi/g	0.0724	0.127	0.127	1.96	0.0993	U	0.221	U	200
160-41496-8	SAMP	RA-007-031721	Soil	Sr-90	pCi/g	0.200	0.16	0.161	1.96	0.119		0.259	U	200
160-41496-9	SAMP	RA-008-031721	Soil	Sr-90	pCi/g	0.042	0.136	0.136	1.96	0.111	U	0.243	U	200
LCS 160-503169/1-A	QC_LCS	LCS 160-503169/1-A	Soil	Sr-90	pCi/g	7.805	0.517	0.813	1.96	0.127		0.278		200
MB 160-503169/21-A	QC_BLK	MB 160-503169/21-A	Soil	Sr-90	pCi/g	0.01919	0.168	0.168	1.96	0.139	U	0.303	U	200
160-41496-1	SAMP	RA-001-031721	Soil	H-3	pCi/g	-0.0653	0.27	0.27	1.96	0.231	U	0.502	U	20
160-41496-10	SAMP	RA-009-031721	Soil	H-3	pCi/g	-0.12	0.264	0.264	1.96	0.232	U	0.504	U	20
160-41496-11	SAMP	RA-010-031721	Soil	H-3	pCi/g	-0.133	0.251	0.252	1.96	0.220	U	0.478	U	20
160-41496-12	SAMP	RA-011-031721	Soil	H-3	pCi/g	0.0258	0.282	0.282	1.96	0.236	U	0.513	U	20
160-41496-13	SAMP	RA-211-031721	Soil	H-3	pCi/g	-0.178	0.245	0.246	1.96	0.218	U	0.474	U	20
160-41496-14	SAMP	RA-012-031721	Soil	H-3	pCi/g	-0.0766	0.268	0.268	1.96	0.231	U	0.504	U	20
160-41496-15	SAMP	RA-013-031721	Soil	H-3	pCi/g	-0.166	0.258	0.258	1.96	0.230	U	0.501	U	20
160-41496-16	SAMP	RA-014-031721	Soil	H-3	pCi/g	-0.108	0.261	0.262	1.96	0.228	U	0.497	U	20
160-41496-17	SAMP	RA-015-031721	Soil	H-3	pCi/g	-0.106	0.265	0.265	1.96	0.231	U	0.503	U	20
160-41496-18	SAMP	RA-016-031721	Soil	H-3	pCi/g	-0.056	0.261	0.262	1.96	0.224	U	0.487	U	20
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	H-3	pCi/g	-0.1802	0.253	0.254	1.96	0.228	U	0.496	U	20
160-41496-2	SAMP	RA-201-031721	Soil	H-3	pCi/g	-0.0519	0.272	0.272	1.96	0.232	U	0.505	U	20
160-41496-3	SAMP	RA-002-031721	Soil	H-3	pCi/g	-0.12	0.26	0.26	1.96	0.227	U	0.494	U	20
160-41496-4	SAMP	RA-003-031721	Soil	H-3	pCi/g	-0.275	0.249	0.25	1.96	0.232	U	0.504	U	20
160-41496-5	SAMP	RA-004-031721	Soil	H-3	pCi/g	-0.112	0.261	0.261	1.96	0.228	U	0.496	U	20
160-41496-6	SAMP	RA-005-031721	Soil	H-3	pCi/g	0.046	0.281	0.281	1.96	0.230	U	0.501	U	20
160-41496-7	SAMP	RA-006-031721	Soil	H-3	pCi/g	-0.138	0.259	0.259	1.96	0.227	U	0.495	U	20
160-41496-8	SAMP	RA-007-031721	Soil	H-3	pCi/g	-0.172	0.265	0.266	1.96	0.237	U	0.517	U	20
160-41496-9	SAMP	RA-008-031721	Soil	H-3	pCi/g	-0.0913	0.264	0.264	1.96	0.229	U	0.499	U	20
LCS 160-502782/2-A	QC_LCS	LCS 160-502782/2-A	Soil	H-3	pCi/g	6.949	0.642	0.878	1.96	0.219		0.476		20
MB 160-502782/1-A	QC_BLK	MB 160-502782/1-A	Soil	H-3	pCi/g	-0.1327	0.244	0.244	1.96	0.215	U	0.468	U	20
160-41496-1	SAMP	RA-001-031721	Soil	Am-241	pCi/g	0.0181	0.0484	0.0485	1.96	0.0355	U	0.0951	U	240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	Am-241	pCi/g	-0.03611	0.0299	0.0302	1.96	0.0376	U	0.0993	U	240
160-41496-10	SAMP	RA-009-031721	Soil	Am-241	pCi/g	0.0161	0.0284	0.0285	1.96	0.0148		0.0537	U	240
160-41496-11	SAMP	RA-010-031721	Soil	Am-241	pCi/g	-0.00408	0.0259	0.0259	1.96	0.0237	U	0.0719	U	240
160-41496-12	SAMP	RA-011-031721	Soil	Am-241	pCi/g	0.0205	0.0304	0.0304	1.96	0.0153		0.0531	U	240
160-41496-13	SAMP	RA-211-031721	Soil	Am-241	pCi/g	-0.0155	0.0298	0.0298	1.96	0.0316	U	0.0897	U	240
160-41496-14	SAMP	RA-012-031721	Soil	Am-241	pCi/g	-0.012	0.02	0.02	1.96	0.0232	U	0.0704	U	240
160-41496-15	SAMP	RA-013-031721	Soil	Am-241	pCi/g	0.0211	0.0355	0.0356	1.96	0.0212	U	0.0654	U	240
160-41496-16	SAMP	RA-014-031721	Soil	Am-241	pCi/g	-0.0201	0.0342	0.0343	1.96	0.0350	U	0.0918	U	240
160-41496-17	SAMP	RA-015-031721	Soil	Am-241	pCi/g	0.018	0.028	0.028	1.96	0.0127		0.0494	U	240
160-41496-18	SAMP	RA-016-031721	Soil	Am-241	pCi/g	0.013	0.0209	0.0209	1.96	0.0068		0.0359	U	240
160-41496-2	SAMP	RA-201-031721	Soil	Am-241	pCi/g	0.0208	0.0384	0.0384	1.96	0.0255	U	0.0717	U	240
160-41496-3	SAMP	RA-002-031721	Soil	Am-241	pCi/g	0.0106	0.0299	0.0299	1.96	0.0206	U	0.0625	U	240
160-41496-4	SAMP	RA-003-031721	Soil	Am-241	pCi/g	0.00203	0.0434	0.0434	1.96	0.0358	U	0.096	U	240
160-41496-5	SAMP	RA-004-031721	Soil	Am-241	pCi/g	0.0556	0.0506	0.051	1.96	0.0216		0.07	U	240
160-41496-6	SAMP	RA-005-031721	Soil	Am-241	pCi/g	0.021	0.0432	0.0433	1.96	0.0289	U	0.0831	U	240
160-41496-7	SAMP	RA-006-031721	Soil	Am-241	pCi/g	-0.00987	0.026	0.026	1.96	0.0262	U	0.0761	U	240
160-41496-8	SAMP	RA-007-031721	Soil	Am-241	pCi/g	-0.00348	0.016	0.016	1.96	0.0157	U	0.0522	U	240
160-41496-9	SAMP	RA-008-031721	Soil	Am-241	pCi/g	0.0137	0.028	0.028	1.96	0.0161	U	0.0558	U	240
LCS 160-504014/2-A	QC_LCS	LCS 160-504014/2-A	Soil	Am-241	pCi/g	3.702	0.367	0.542	1.96	0.0443		0.116		240
MB 160-504014/1-A	QC_BLK	MB 160-504014/1-A	Soil	Am-241	pCi/g	-0.09433	0.0459	0.047	1.96	0.0602	U	0.146	U	240

160-41496-1	SAMP	RA-001-031721	Soil	Pu-238	pCi/g	0.00901	0.0262	0.0262	1.96	0.0175	U	0.0567	U	240
160-41496-1	SAMP	RA-001-031721	Soil	Pu-239/Pu-240	pCi/g	-0.0162	0.0106	0.0107	1.96	0.0199	U	0.0615	U	240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	Pu-238	pCi/g	0.01521	0.0269	0.0269	1.96	0.0140		0.0508	U	240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	Pu-239/Pu-240	pCi/g	0.01713	0.0266	0.0267	1.96	0.0121		0.0471	U	240
160-41496-10	SAMP	RA-009-031721	Soil	Pu-238	pCi/g	0.0036	0.0269	0.0269	1.96	0.0209	U	0.0635	U	240
160-41496-10	SAMP	RA-009-031721	Soil	Pu-239/Pu-240	pCi/g	0.0108	0.0304	0.0304	1.96	0.0210	U	0.0635	U	240
160-41496-11	SAMP	RA-010-031721	Soil	Pu-238	pCi/g	0.0178	0.0293	0.0293	1.96	0.0161		0.0536	U	240
160-41496-11	SAMP	RA-010-031721	Soil	Pu-239/Pu-240	pCi/g	0.00715	0.021	0.021	1.96	0.0131	U	0.0477	U	240
160-41496-12	SAMP	RA-011-031721	Soil	Pu-238	pCi/g	0.000	0.0229	0.0229	1.96	0.0192	U	0.0605	U	240
160-41496-12	SAMP	RA-011-031721	Soil	Pu-239/Pu-240	pCi/g	-0.00185	0.00362	0.00362	1.96	0.0068	U	0.0357	U	240
160-41496-13	SAMP	RA-211-031721	Soil	Pu-238	pCi/g	0.00184	0.0157	0.0157	1.96	0.0117	U	0.0454	U	240
160-41496-13	SAMP	RA-211-031721	Soil	Pu-239/Pu-240	pCi/g	0.0165	0.0257	0.0258	1.96	0.0117		0.0455	U	240
160-41496-14	SAMP	RA-012-031721	Soil	Pu-238	pCi/g	0.0155	0.0273	0.0274	1.96	0.0142		0.0517	U	240
160-41496-14	SAMP	RA-012-031721	Soil	Pu-239/Pu-240	pCi/g	-0.00581	0.00657	0.00659	1.96	0.0123	U	0.0479	U	240
160-41496-15	SAMP	RA-013-031721	Soil	Pu-238	pCi/g	0.019	0.0312	0.0313	1.96	0.0172		0.0572	U	240
160-41496-15	SAMP	RA-013-031721	Soil	Pu-239/Pu-240	pCi/g	0.000	0.0167	0.0167	1.96	0.0140	U	0.0509	U	240
160-41496-16	SAMP	RA-014-031721	Soil	Pu-238	pCi/g	0.00736	0.027	0.027	1.96	0.0191	U	0.0604	U	240
160-41496-16	SAMP	RA-014-031721	Soil	Pu-239/Pu-240	pCi/g	0.00552	0.0149	0.0149	1.96	0.0068	U	0.0356	U	240
160-41496-17	SAMP	RA-015-031721	Soil	Pu-238	pCi/g	0.00948	0.022	0.022	1.96	0.0121	U	0.0469	U	240
160-41496-17	SAMP	RA-015-031721	Soil	Pu-239/Pu-240	pCi/g	0.00949	0.022	0.022	1.96	0.0121	U	0.0469	U	240
160-41496-18	SAMP	RA-016-031721	Soil	Pu-238	pCi/g	0.000	0.016	0.016	1.96	0.0134	U	0.0488	U	240
160-41496-18	SAMP	RA-016-031721	Soil	Pu-239/Pu-240	pCi/g	0.00914	0.0212	0.0212	1.96	0.0117	U	0.0452	U	240
160-41496-2	SAMP	RA-201-031721	Soil	Pu-238	pCi/g	-0.0109	0.0182	0.0183	1.96	0.0212	U	0.0643	U	240
160-41496-2	SAMP	RA-201-031721	Soil	Pu-239/Pu-240	pCi/g	0.00548	0.0218	0.0218	1.96	0.0150	U	0.052	U	240
160-41496-3	SAMP	RA-002-031721	Soil	Pu-238	pCi/g	-0.00173	0.0155	0.0155	1.96	0.0142	U	0.0492	U	240
160-41496-3	SAMP	RA-002-031721	Soil	Pu-239/Pu-240	pCi/g	0.00866	0.0294	0.0294	1.96	0.0211	U	0.063	U	240
160-41496-4	SAMP	RA-003-031721	Soil	Pu-238	pCi/g	0.000	0.0229	0.0229	1.96	0.0192	U	0.0606	U	240
160-41496-4	SAMP	RA-003-031721	Soil	Pu-239/Pu-240	pCi/g	0.00925	0.0215	0.0215	1.96	0.0118	U	0.0458	U	240
160-41496-5	SAMP	RA-004-031721	Soil	Pu-238	pCi/g	0.0202	0.0252	0.0252	1.96	0.0067		0.0355	U	240
160-41496-5	SAMP	RA-004-031721	Soil	Pu-239/Pu-240	pCi/g	0.0128	0.0207	0.0207	1.96	0.0068		0.0355	U	240
160-41496-6	SAMP	RA-005-031721	Soil	Pu-238	pCi/g	-0.0399	0.0171	0.0174	1.96	0.0320	U	0.0869	U	240
160-41496-6	SAMP	RA-005-031721	Soil	Pu-239/Pu-240	pCi/g	-0.00571	0.0244	0.0245	1.96	0.0232	U	0.0692	U	240
160-41496-7	SAMP	RA-006-031721	Soil	Pu-238	pCi/g	-0.0056	0.0175	0.0176	1.96	0.0182	U	0.0587	U	240
160-41496-7	SAMP	RA-006-031721	Soil	Pu-239/Pu-240	pCi/g	0.0168	0.0262	0.0262	1.96	0.0119		0.0462	U	240
160-41496-8	SAMP	RA-007-031721	Soil	Pu-238	pCi/g	0.00356	0.0215	0.0215	1.96	0.0160	U	0.0534	U	240
160-41496-8	SAMP	RA-007-031721	Soil	Pu-239/Pu-240	pCi/g	0.0107	0.03	0.03	1.96	0.0207	U	0.0628	U	240
160-41496-9	SAMP	RA-008-031721	Soil	Pu-238	pCi/g	0.00597	0.0295	0.0295	1.96	0.0220	U	0.0678	U	240
160-41496-9	SAMP	RA-008-031721	Soil	Pu-239/Pu-240	pCi/g	-0.012	0.0199	0.0199	1.96	0.0232	U	0.0703	U	240
LCS 160-504016/2-A	QC_LCS	LCS 160-504016/2-A	Soil	Pu-238	pCi/g	4.536	0.355	0.515	1.96	0.0133		0.0482		240
LCS 160-504016/2-A	QC_LCS	LCS 160-504016/2-A	Soil	Pu-239/Pu-240	pCi/g	4.633	0.359	0.524	1.96	0.0148		0.0513		240
MB 160-504016/1-A	QC_BLK	MB 160-504016/1-A	Soil	Pu-238	pCi/g	-0.0105	0.0092	0.00924	1.96	0.0173	U	0.0597	U	240
MB 160-504016/1-A	QC_BLK	MB 160-504016/1-A	Soil	Pu-239/Pu-240	pCi/g	0.02102	0.0291	0.0292	1.96	0.0109		0.0471	U	240
160-41496-1	SAMP	RA-001-031721	Soil	U-235/U-236	pCi/g	0.00845	0.0417	0.0417	1.96	0.0311	U	0.096	U	240
160-41496-1	SAMP	RA-001-031721	Soil	U-238	pCi/g	0.475	0.129	0.135	1.96	0.0118		0.0506		240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	U-233/U-234	pCi/g	0.4005	0.122	0.126	1.96	0.0336		0.093		240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	U-235/U-236	pCi/g	0.005359	0.0223	0.0223	1.96	0.0139	U	0.06	U	240
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	U-238	pCi/g	0.3481	0.11	0.113	1.96	0.0194		0.0645		240
160-41496-10	SAMP	RA-009-031721	Soil	U-235/U-236	pCi/g	0.00289	0.0436	0.0436	1.96	0.0353	U	0.105	U	240
160-41496-10	SAMP	RA-009-031721	Soil	U-238	pCi/g	0.369	0.117	0.121	1.96	0.0191		0.066		240
160-41496-11	SAMP	RA-010-031721	Soil	U-235/U-236	pCi/g	-0.00285	0.00558	0.00558	1.96	0.0105	U	0.0551	U	240
160-41496-11	SAMP	RA-010-031721	Soil	U-238	pCi/g	0.429	0.124	0.129	1.96	0.0168		0.061		240
160-41496-12	SAMP	RA-011-031721	Soil	U-235/U-236	pCi/g	0.049	0.0483	0.0485	1.96	0.0142		0.061	U	240
160-41496-12	SAMP	RA-011-031721	Soil	U-238	pCi/g	0.454	0.125	0.13	1.96	0.0161		0.0584		240
160-41496-13	SAMP	RA-211-031721	Soil	U-235/U-236	pCi/g	0.0202	0.0325	0.0326	1.96	0.0106		0.0559	U	240
160-41496-13	SAMP	RA-211-031721	Soil	U-238	pCi/g	0.391	0.119	0.124	1.96	0.0148		0.0573		240
160-41496-14	SAMP	RA-012-031721	Soil	U-235/U-236	pCi/g	0.0378	0.0531	0.0532	1.96	0.0283		0.0915	U	240
160-41496-14	SAMP	RA-012-031721	Soil	U-238	pCi/g	0.338	0.113	0.117	1.96	0.0227		0.0734		240
160-41496-15	SAMP	RA-013-031721	Soil	U-235/U-236	pCi/g	0.0322	0.0402	0.0403	1.96	0.0108		0.0567	U	240
160-41496-15	SAMP	RA-013-031721	Soil	U-238	pCi/g	0.364	0.12	0.124	1.96	0.0312		0.0905		240
160-41496-16	SAMP	RA-014-031721	Soil	U-235/U-236	pCi/g	0.0307	0.0383	0.0384	1.96	0.0103		0.054	U	240
160-41496-16	SAMP	RA-014-031721	Soil	U-238	pCi/g	0.378	0.115	0.119	1.96	0.0143		0.0554		240
160-41496-17	SAMP	RA-015-031721	Soil	U-235/U-236	pCi/g	0.025	0.0442	0.0443	1.96	0.0230		0.0836	U	240
160-41496-17	SAMP	RA-015-031721	Soil	U-238	pCi/g	0.409	0.128	0.132	1.96	0.0206		0.0714		240
160-41496-18	SAMP	RA-016-031721	Soil	U-235/U-236	pCi/g	0.0109	0.0214	0.0214	1.96	0.0100		0.0327	U	240

160-41496-18	SAMP	RA-016-031721	Soil	U-238	pCi/g	0.398	0.116	0.121	1.96	0.0114		0.049		240
160-41496-2	SAMP	RA-201-031721	Soil	U-235/U-236	pCi/g	0.0675	0.0543	0.0546	1.96	0.0135		0.0581		240
160-41496-2	SAMP	RA-201-031721	Soil	U-238	pCi/g	0.312	0.101	0.104	1.96	0.0108		0.0466		240
160-41496-3	SAMP	RA-002-031721	Soil	U-235/U-236	pCi/g	-0.00536	0.00742	0.00744	1.96	0.0139	U	0.06	U	240
160-41496-3	SAMP	RA-002-031721	Soil	U-238	pCi/g	0.346	0.108	0.112	1.96	0.0137		0.0532		240
160-41496-4	SAMP	RA-003-031721	Soil	U-235/U-236	pCi/g	-0.00288	0.00565	0.00566	1.96	0.0106	U	0.0558	U	240
160-41496-4	SAMP	RA-003-031721	Soil	U-238	pCi/g	0.303	0.104	0.107	1.96	0.0085		0.0448		240
160-41496-5	SAMP	RA-004-031721	Soil	U-235/U-236	pCi/g	0.00901	0.0243	0.0243	1.96	0.0110	U	0.0581	U	240
160-41496-5	SAMP	RA-004-031721	Soil	U-238	pCi/g	0.448	0.133	0.138	1.96	0.0280		0.0849		240
160-41496-6	SAMP	RA-005-031721	Soil	U-235/U-236	pCi/g	0.012	0.0439	0.0439	1.96	0.0311	U	0.0981	U	240
160-41496-6	SAMP	RA-005-031721	Soil	U-238	pCi/g	0.300	0.111	0.113	1.96	0.0293		0.0873		240
160-41496-7	SAMP	RA-006-031721	Soil	U-235/U-236	pCi/g	0.0409	0.0431	0.0433	1.96	0.0100		0.0528	U	240
160-41496-7	SAMP	RA-006-031721	Soil	U-238	pCi/g	0.416	0.121	0.125	1.96	0.0197		0.0657		240
160-41496-8	SAMP	RA-007-031721	Soil	U-235/U-236	pCi/g	0.0181	0.037	0.037	1.96	0.0213	U	0.0737	U	240
160-41496-8	SAMP	RA-007-031721	Soil	U-238	pCi/g	0.332	0.105	0.108	1.96	0.0153		0.0555		240
160-41496-9	SAMP	RA-008-031721	Soil	U-235/U-236	pCi/g	0.023	0.0319	0.032	1.96	0.0106		0.0345	U	240
160-41496-9	SAMP	RA-008-031721	Soil	U-238	pCi/g	0.383	0.117	0.122	1.96	0.0120		0.0517		240
LCS 160-504017/2-A	QC_LCS	LCS 160-504017/2-A	Soil	U-233/U-234	pCi/g	6.047	0.505	0.709	1.96	0.0569		0.146		240
LCS 160-504017/2-A	QC_LCS	LCS 160-504017/2-A	Soil	U-238	pCi/g	6.00	0.499	0.702	1.96	0.0312		0.0947		240
MB 160-504017/1-A	QC_BLK	MB 160-504017/1-A	Soil	U-233/U-234	pCi/g	-0.05094	0.0428	0.043	1.96	0.0513	U	0.132	U	240
MB 160-504017/1-A	QC_BLK	MB 160-504017/1-A	Soil	U-235/U-236	pCi/g	0.003019	0.0454	0.0454	1.96	0.0368	U	0.11	U	240
MB 160-504017/1-A	QC_BLK	MB 160-504017/1-A	Soil	U-238	pCi/g	0.0121	0.0462	0.0463	1.96	0.0345	U	0.098	U	240
160-41496-1	SAMP	RA-001-031721	Soil	Cs-137	pCi/g	0.231	0.063	0.0673	1.96	0.0195		0.0463		30
160-41496-1	SAMP	RA-001-031721	Soil	Co-60	pCi/g	0.00242	0.0607	0.0607	1.96	0.0306	U	0.0718	U	30
160-41496-1	SAMP	RA-001-031721	Soil	K-40	pCi/g	6.11	1	1.18	1.96	0.235		0.577		30
160-41496-1	SAMP	RA-001-031721	Soil	Ra-226	pCi/g	0.54	0.116	0.128	1.96	0.0415		0.0955		30
160-41496-1	SAMP	RA-001-031721	Soil	Am-241	pCi/g	-0.0498	0.153	0.154	1.96	0.0963	U	0.201	U	30
160-41496-1	SAMP	RA-001-031721	Soil	Eu-152	pCi/g	0.103	0.179	0.18	1.96	0.0808		0.169	U	30
160-41496-1	SAMP	RA-001-031721	Soil	Eu-154	pCi/g	0.239	0.0793	0.083	1.96	0.0540		0.113		30
160-41496-10	SAMP	RA-009-031721	Soil	Cs-137	pCi/g	0.277	0.0629	0.0689	1.96	0.0196		0.0458		30
160-41496-10	SAMP	RA-009-031721	Soil	Co-60	pCi/g	0.00549	0.0325	0.0325	1.96	0.0280	U	0.0657	U	30
160-41496-10	SAMP	RA-009-031721	Soil	K-40	pCi/g	5.29	1.04	1.17	1.96	0.291		0.679		30
160-41496-10	SAMP	RA-009-031721	Soil	Ra-226	pCi/g	0.593	0.118	0.132	1.96	0.0388		0.089		30
160-41496-10	SAMP	RA-009-031721	Soil	Am-241	pCi/g	0.0215	0.131	0.131	1.96	0.110	U	0.227	U	30
160-41496-10	SAMP	RA-009-031721	Soil	Eu-152	pCi/g	0.111	0.177	0.178	1.96	0.0803		0.167	U	30
160-41496-10	SAMP	RA-009-031721	Soil	Eu-154	pCi/g	0.126	0.054	0.0555	1.96	0.0533		0.111		30
160-41496-11	SAMP	RA-010-031721	Soil	Cs-137	pCi/g	0.0342	0.0568	0.0569	1.96	0.0454	U	0.0972	U	30
160-41496-11	SAMP	RA-010-031721	Soil	Co-60	pCi/g	0.00219	0.055	0.055	1.96	0.0278	U	0.0651	U	30
160-41496-11	SAMP	RA-010-031721	Soil	K-40	pCi/g	5.18	0.882	1.02	1.96	0.213		0.523		30
160-41496-11	SAMP	RA-010-031721	Soil	Ra-226	pCi/g	0.448	0.108	0.117	1.96	0.0422		0.0956		30
160-41496-11	SAMP	RA-010-031721	Soil	Am-241	pCi/g	0.0603	0.137	0.138	1.96	0.113	U	0.235	U	30
160-41496-11	SAMP	RA-010-031721	Soil	Eu-152	pCi/g	0.0344	0.0656	0.0657	1.96	0.0811	U	0.169	U	30
160-41496-11	SAMP	RA-010-031721	Soil	Eu-154	pCi/g	0.00108	0.00127	0.00127	1.96	0.0580	U	0.121	U	30
160-41496-12	SAMP	RA-011-031721	Soil	Cs-137	pCi/g	0.149	0.0533	0.0554	1.96	0.0199		0.0464		30
160-41496-12	SAMP	RA-011-031721	Soil	Co-60	pCi/g	0.0253	0.0175	0.0177	1.96	0.0083		0.0262	U	30
160-41496-12	SAMP	RA-011-031721	Soil	K-40	pCi/g	5.02	0.831	0.971	1.96	0.0835		0.264		30
160-41496-12	SAMP	RA-011-031721	Soil	Ra-226	pCi/g	0.463	0.0931	0.104	1.96	0.0274		0.0663		30
160-41496-12	SAMP	RA-011-031721	Soil	Am-241	pCi/g	-0.0793	0.158	0.159	1.96	0.0988	U	0.205	U	30
160-41496-12	SAMP	RA-011-031721	Soil	Eu-152	pCi/g	0.0465	0.114	0.114	1.96	0.0799	U	0.166	U	30
160-41496-12	SAMP	RA-011-031721	Soil	Eu-154	pCi/g	0.0392	0.0756	0.0757	1.96	0.0513	U	0.107	U	30
160-41496-13	SAMP	RA-211-031721	Soil	Cs-137	pCi/g	0.164	0.0565	0.0589	1.96	0.0212		0.0511		30
160-41496-13	SAMP	RA-211-031721	Soil	Co-60	pCi/g	-0.0254	0.0705	0.0705	1.96	0.0368	U	0.0862	U	30
160-41496-13	SAMP	RA-211-031721	Soil	K-40	pCi/g	4.76	0.997	1.11	1.96	0.300		0.728		30
160-41496-13	SAMP	RA-211-031721	Soil	Ra-226	pCi/g	0.538	0.13	0.141	1.96	0.0485		0.112		30
160-41496-13	SAMP	RA-211-031721	Soil	Am-241	pCi/g	0.0298	0.166	0.166	1.96	0.110	U	0.23	U	30
160-41496-13	SAMP	RA-211-031721	Soil	Eu-152	pCi/g	0.132	0.159	0.16	1.96	0.0892		0.187	U	30
160-41496-13	SAMP	RA-211-031721	Soil	Eu-154	pCi/g	0.0471	0.0899	0.09	1.96	0.0661	U	0.138	U	30
160-41496-14	SAMP	RA-012-031721	Soil	Cs-137	pCi/g	0.246	0.0745	0.0796	1.96	0.0252		0.0611		30
160-41496-14	SAMP	RA-012-031721	Soil	Co-60	pCi/g	-0.0586	0.122	0.122	1.96	0.0611	U	0.138	U	30
160-41496-14	SAMP	RA-012-031721	Soil	K-40	pCi/g	6.36	1.18	1.38	1.96	0.133		0.422		30
160-41496-14	SAMP	RA-012-031721	Soil	Ra-226	pCi/g	0.544	0.141	0.154	1.96	0.0467		0.112		30
160-41496-14	SAMP	RA-012-031721	Soil	Am-241	pCi/g	0.0856	0.195	0.196	1.96	0.161	U	0.333	U	30
160-41496-14	SAMP	RA-012-031721	Soil	Eu-152	pCi/g	-0.0816	0.15	0.15	1.96	0.123	U	0.256	U	30
160-41496-14	SAMP	RA-012-031721	Soil	Eu-154	pCi/g	0.0911	0.174	0.175	1.96	0.0799		0.167	U	30

160-41496-15	SAMP	RA-013-031721	Soil	Cs-137	pCi/g	0.0287	0.0871	0.0872	1.96	0.0705	U	0.153	U	30
160-41496-15	SAMP	RA-013-031721	Soil	Co-60	pCi/g	0.0415	0.0783	0.0784	1.96	0.0379		0.0942	U	30
160-41496-15	SAMP	RA-013-031721	Soil	K-40	pCi/g	5.10	1.18	1.28	1.96	0.160		0.507		30
160-41496-15	SAMP	RA-013-031721	Soil	Ra-226	pCi/g	0.466	0.133	0.141	1.96	0.0506		0.122		30
160-41496-15	SAMP	RA-013-031721	Soil	Am-241	pCi/g	0.0163	0.124	0.124	1.96	0.0876	U	0.186	U	30
160-41496-15	SAMP	RA-013-031721	Soil	Eu-152	pCi/g	0.0467	0.165	0.165	1.96	0.0956	U	0.201	U	30
160-41496-15	SAMP	RA-013-031721	Soil	Eu-154	pCi/g	0.0611	0.0732	0.0735	1.96	0.0727	U	0.152	U	30
160-41496-16	SAMP	RA-014-031721	Soil	Cs-137	pCi/g	0.174	0.0513	0.0543	1.96	0.0137		0.0355		30
160-41496-16	SAMP	RA-014-031721	Soil	Co-60	pCi/g	0.0283	0.0226	0.0228	1.96	0.0110		0.0348	U	30
160-41496-16	SAMP	RA-014-031721	Soil	K-40	pCi/g	4.57	0.957	1.06	1.96	0.219		0.569		30
160-41496-16	SAMP	RA-014-031721	Soil	Ra-226	pCi/g	0.507	0.0993	0.112	1.96	0.0118		0.0373		30
160-41496-16	SAMP	RA-014-031721	Soil	Am-241	pCi/g	0.0877	0.152	0.153	1.96	0.125	U	0.258	U	30
160-41496-16	SAMP	RA-014-031721	Soil	Eu-152	pCi/g	0.00378	0.00548	0.00549	1.96	0.0845	U	0.175	U	30
160-41496-16	SAMP	RA-014-031721	Soil	Eu-154	pCi/g	0.0785	0.116	0.116	1.96	0.0566		0.118	U	30
160-41496-17	SAMP	RA-015-031721	Soil	Cs-137	pCi/g	0.271	0.0674	0.0728	1.96	0.0195		0.0479		30
160-41496-17	SAMP	RA-015-031721	Soil	Co-60	pCi/g	-0.011	0.0743	0.0743	1.96	0.0370	U	0.0867	U	30
160-41496-17	SAMP	RA-015-031721	Soil	K-40	pCi/g	4.08	0.863	0.955	1.96	0.111		0.35		30
160-41496-17	SAMP	RA-015-031721	Soil	Ra-226	pCi/g	0.321	0.113	0.118	1.96	0.190		0.395	U	30
160-41496-17	SAMP	RA-015-031721	Soil	Am-241	pCi/g	0.0279	0.168	0.168	1.96	0.112	U	0.233	U	30
160-41496-17	SAMP	RA-015-031721	Soil	Eu-152	pCi/g	0.104	0.188	0.188	1.96	0.0834		0.175	U	30
160-41496-17	SAMP	RA-015-031721	Soil	Eu-154	pCi/g	0.0787	0.127	0.127	1.96	0.0530		0.112	U	30
160-41496-18	SAMP	RA-016-031721	Soil	Cs-137	pCi/g	0.133	0.0507	0.0524	1.96	0.0149		0.0403		30
160-41496-18	SAMP	RA-016-031721	Soil	Co-60	pCi/g	0.0668	0.0395	0.04	1.96	0.0141		0.0447		30
160-41496-18	SAMP	RA-016-031721	Soil	K-40	pCi/g	4.44	1.06	1.15	1.96	0.219		0.606		30
160-41496-18	SAMP	RA-016-031721	Soil	Ra-226	pCi/g	0.61	0.144	0.157	1.96	0.0462		0.111		30
160-41496-18	SAMP	RA-016-031721	Soil	Am-241	pCi/g	0.0771	0.183	0.183	1.96	0.152	U	0.312	U	30
160-41496-18	SAMP	RA-016-031721	Soil	Eu-152	pCi/g	0.0958	0.237	0.238	1.96	0.0828		0.174	U	30
160-41496-18	SAMP	RA-016-031721	Soil	Eu-154	pCi/g	0.0551	0.123	0.123	1.96	0.0528		0.111	U	30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Cs-137	pCi/g	0.04741	0.0787	0.0788	1.96	0.0633	U	0.134	U	30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Co-60	pCi/g	0.01391	0.048	0.0481	1.96	0.0231	U	0.0576	U	30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	K-40	pCi/g	5.715	0.96	1.12	1.96	0.0979		0.31		30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Ra-226	pCi/g	0.5651	0.129	0.141	1.96	0.0368		0.0872		30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Am-241	pCi/g	-0.06879	0.155	0.155	1.96	0.102	U	0.212	U	30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Eu-152	pCi/g	0.07897	0.0787	0.0791	1.96	0.0721		0.152	U	30
160-41496-18 DU	QC_DUP	160-41496-18 DU	Soil	Eu-154	pCi/g	0.0643	0.104	0.104	1.96	0.0537		0.113	U	30
160-41496-2	SAMP	RA-201-031721	Soil	Cs-137	pCi/g	0.0388	0.0606	0.0607	1.96	0.0481	U	0.103	U	30
160-41496-2	SAMP	RA-201-031721	Soil	Co-60	pCi/g	-0.0434	0.109	0.109	1.96	0.0536	U	0.118	U	30
160-41496-2	SAMP	RA-201-031721	Soil	K-40	pCi/g	6.73	1.01	1.22	1.96	0.0928		0.294		30
160-41496-2	SAMP	RA-201-031721	Soil	Ra-226	pCi/g	0.0723	0.0914	0.0917	1.96	0.117	U	0.247	U	30
160-41496-2	SAMP	RA-201-031721	Soil	Am-241	pCi/g	-0.0911	0.182	0.182	1.96	0.113	U	0.236	U	30
160-41496-2	SAMP	RA-201-031721	Soil	Eu-152	pCi/g	0.114	0.156	0.157	1.96	0.0822		0.172	U	30
160-41496-2	SAMP	RA-201-031721	Soil	Eu-154	pCi/g	-0.000815	0.000959	0.000963	1.96	0.0598	U	0.125	U	30
160-41496-3	SAMP	RA-002-031721	Soil	Cs-137	pCi/g	0.201	0.0738	0.0766	1.96	0.0470		0.102		30
160-41496-3	SAMP	RA-002-031721	Soil	Co-60	pCi/g	0.0189	0.0508	0.0509	1.96	0.0242	U	0.0601	U	30
160-41496-3	SAMP	RA-002-031721	Soil	K-40	pCi/g	5.88	0.995	1.16	1.96	0.102		0.323		30
160-41496-3	SAMP	RA-002-031721	Soil	Ra-226	pCi/g	0.661	0.127	0.144	1.96	0.0238		0.0618		30
160-41496-3	SAMP	RA-002-031721	Soil	Am-241	pCi/g	0.0576	0.13	0.13	1.96	0.0847	U	0.178	U	30
160-41496-3	SAMP	RA-002-031721	Soil	Eu-152	pCi/g	0.29	0.138	0.141	1.96	0.0914		0.191		30
160-41496-3	SAMP	RA-002-031721	Soil	Eu-154	pCi/g	0.0575	0.0952	0.0954	1.96	0.0647	U	0.135	U	30
160-41496-4	SAMP	RA-003-031721	Soil	Cs-137	pCi/g	0.242	0.0916	0.0949	1.96	0.0379		0.0887		30
160-41496-4	SAMP	RA-003-031721	Soil	Co-60	pCi/g	0.00931	0.0775	0.0775	1.96	0.0405	U	0.101	U	30
160-41496-4	SAMP	RA-003-031721	Soil	K-40	pCi/g	5.88	1.31	1.43	1.96	0.171		0.542		30
160-41496-4	SAMP	RA-003-031721	Soil	Ra-226	pCi/g	0.509	0.165	0.173	1.96	0.0679		0.158		30
160-41496-4	SAMP	RA-003-031721	Soil	Am-241	pCi/g	-0.0269	0.121	0.121	1.96	0.100	U	0.212	U	30
160-41496-4	SAMP	RA-003-031721	Soil	Eu-152	pCi/g	0.0597	0.286	0.286	1.96	0.230	U	0.484	U	30
160-41496-4	SAMP	RA-003-031721	Soil	Eu-154	pCi/g	0.0165	0.112	0.112	1.96	0.0646	U	0.137	U	30
160-41496-5	SAMP	RA-004-031721	Soil	Cs-137	pCi/g	0.153	0.043	0.0458	1.96	0.0112		0.0288		30
160-41496-5	SAMP	RA-004-031721	Soil	Co-60	pCi/g	0.0377	0.0169	0.0173	1.96	0.0082		0.0259		30
160-41496-5	SAMP	RA-004-031721	Soil	K-40	pCi/g	4.67	0.839	0.961	1.96	0.213		0.522		30
160-41496-5	SAMP	RA-004-031721	Soil	Ra-226	pCi/g	0.431	0.0982	0.108	1.96	0.0344		0.0801		30
160-41496-5	SAMP	RA-004-031721	Soil	Am-241	pCi/g	-0.0655	0.125	0.125	1.96	0.102	U	0.213	U	30
160-41496-5	SAMP	RA-004-031721	Soil	Eu-152	pCi/g	0.0701	0.0961	0.0964	1.96	0.0656		0.138	U	30
160-41496-5	SAMP	RA-004-031721	Soil	Eu-154	pCi/g	0.0609	0.0811	0.0813	1.96	0.0441		0.0928	U	30
160-41496-6	SAMP	RA-005-031721	Soil	Cs-137	pCi/g	0.197	0.0745	0.0771	1.96	0.0500		0.107		30

160-41496-6	SAMP	RA-005-031721	Soil	Co-60	pCi/g	0.0147	0.0258	0.0258	1.96	0.0216	U	0.0537	U	30
160-41496-6	SAMP	RA-005-031721	Soil	K-40	pCi/g	5.77	0.932	1.1	1.96	0.0914		0.289		30
160-41496-6	SAMP	RA-005-031721	Soil	Ra-226	pCi/g	0.51	0.128	0.138	1.96	0.0496		0.112		30
160-41496-6	SAMP	RA-005-031721	Soil	Am-241	pCi/g	0.0709	0.148	0.149	1.96	0.122	U	0.253	U	30
160-41496-6	SAMP	RA-005-031721	Soil	Eu-152	pCi/g	0.0393	0.0445	0.0447	1.96	0.219	U	0.453	U	30
160-41496-6	SAMP	RA-005-031721	Soil	Eu-154	pCi/g	0.0291	0.074	0.0741	1.96	0.0610	U	0.127	U	30
160-41496-7	SAMP	RA-006-031721	Soil	Cs-137	pCi/g	0.201	0.075	0.0778	1.96	0.0478		0.104		30
160-41496-7	SAMP	RA-006-031721	Soil	Co-60	pCi/g	0.0183	0.0309	0.031	1.96	0.0354	U	0.0831	U	30
160-41496-7	SAMP	RA-006-031721	Soil	K-40	pCi/g	5.18	0.951	1.08	1.96	0.106		0.335		30
160-41496-7	SAMP	RA-006-031721	Soil	Ra-226	pCi/g	0.527	0.123	0.134	1.96	0.0349		0.0845		30
160-41496-7	SAMP	RA-006-031721	Soil	Am-241	pCi/g	-0.0709	0.163	0.163	1.96	0.107	U	0.224	U	30
160-41496-7	SAMP	RA-006-031721	Soil	Eu-152	pCi/g	0.0507	0.0928	0.0929	1.96	0.0922	U	0.193	U	30
160-41496-7	SAMP	RA-006-031721	Soil	Eu-154	pCi/g	0.0841	0.106	0.106	1.96	0.0630		0.132	U	30
160-41496-8	SAMP	RA-007-031721	Soil	Cs-137	pCi/g	0.283	0.077	0.0822	1.96	0.0224		0.0576		30
160-41496-8	SAMP	RA-007-031721	Soil	Co-60	pCi/g	-0.00279	0.0734	0.0734	1.96	0.0169	U	0.0534	U	30
160-41496-8	SAMP	RA-007-031721	Soil	K-40	pCi/g	5.28	1.24	1.35	1.96	0.171		0.54		30
160-41496-8	SAMP	RA-007-031721	Soil	Ra-226	pCi/g	0.668	0.167	0.18	1.96	0.0539		0.13		30
160-41496-8	SAMP	RA-007-031721	Soil	Am-241	pCi/g	-0.0224	0.0994	0.0994	1.96	0.112	U	0.235	U	30
160-41496-8	SAMP	RA-007-031721	Soil	Eu-152	pCi/g	0.0406	0.0319	0.0321	1.96	0.102	U	0.214	U	30
160-41496-8	SAMP	RA-007-031721	Soil	Eu-154	pCi/g	0.20	0.0837	0.0862	1.96	0.0743		0.156		30
160-41496-9	SAMP	RA-008-031721	Soil	Cs-137	pCi/g	0.165	0.0543	0.0569	1.96	0.0181		0.0426		30
160-41496-9	SAMP	RA-008-031721	Soil	Co-60	pCi/g	0.0211	0.0172	0.0173	1.96	0.0082		0.0261	U	30
160-41496-9	SAMP	RA-008-031721	Soil	K-40	pCi/g	4.52	0.829	0.945	1.96	0.214		0.525		30
160-41496-9	SAMP	RA-008-031721	Soil	Ra-226	pCi/g	0.416	0.105	0.114	1.96	0.0423		0.0959		30
160-41496-9	SAMP	RA-008-031721	Soil	Am-241	pCi/g	-0.0646	0.143	0.143	1.96	0.118	U	0.243	U	30
160-41496-9	SAMP	RA-008-031721	Soil	Eu-152	pCi/g	0.0917	0.163	0.163	1.96	0.0673		0.141	U	30
160-41496-9	SAMP	RA-008-031721	Soil	Eu-154	pCi/g	0.026	0.0349	0.035	1.96	0.0556	U	0.116	U	30
LCS 160-502826/2-A	QC_LCS	LCS 160-502826/2-A	Soil	Cs-137	pCi/g	27.44	0.768	2.9	1.96	0.107		0.228		30
LCS 160-502826/2-A	QC_LCS	LCS 160-502826/2-A	Soil	Co-60	pCi/g	9.089	0.377	0.97	1.96	0.0186		0.0587		30
LCS 160-502826/2-A	QC_LCS	LCS 160-502826/2-A	Soil	Am-241	pCi/g	97.9	1.68	10.1	1.96	0.610		1.23		30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Cs-137	pCi/g	-0.04901	0.0858	0.086	1.96	0.0684	U	0.148	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Co-60	pCi/g	0.0227	0.0182	0.0183	1.96	0.032	U	0.0806	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	K-40	pCi/g	0.1765	0.711	0.711	1.96	0.336	U	0.831	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Ra-226	pCi/g	0.000	0.0672	0.0672	1.96	0.144	U	0.307	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Am-241	pCi/g	0.006019	0.0959	0.0959	1.96	0.0637	U	0.14	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Eu-152	pCi/g	0.1022	0.0578	0.0588	1.96	0.0563		0.123	U	30
MB 160-502826/1-A	QC_BLK	MB 160-502826/1-A	Soil	Eu-154	pCi/g	0.1258	0.0712	0.0723	1.96	0.0358		0.079		30
160-41496-1	SAMP	RA-001-031721	Soil	Ni-63	pCi/g	-0.584	2.49	2.49	1.96	2.11	U	4.4	U	60
160-41496-1 DU	QC_DUP	160-41496-1 DU	Soil	Ni-63	pCi/g	-0.08739	1.04	1.04	1.96	0.874	U	1.83	U	60
160-41496-10	SAMP	RA-009-031721	Soil	Ni-63	pCi/g	0.85	1.94	1.94	1.96	1.59	U	3.32	U	60
160-41496-11	SAMP	RA-010-031721	Soil	Ni-63	pCi/g	-1.26	1.95	1.96	1.96	1.69	U	3.52	U	60
160-41496-12	SAMP	RA-011-031721	Soil	Ni-63	pCi/g	-0.824	2.24	2.24	1.96	1.91	U	3.98	U	60
160-41496-13	SAMP	RA-211-031721	Soil	Ni-63	pCi/g	0.449	2.45	2.45	1.96	2.03	U	4.24	U	60
160-41496-14	SAMP	RA-012-031721	Soil	Ni-63	pCi/g	-0.433	1.92	1.92	1.96	1.62	U	3.39	U	60
160-41496-15	SAMP	RA-013-031721	Soil	Ni-63	pCi/g	0.728	1.91	1.91	1.96	1.57	U	3.29	U	60
160-41496-16	SAMP	RA-014-031721	Soil	Ni-63	pCi/g	-0.0899	1.89	1.89	1.96	1.59	U	3.31	U	60
160-41496-17	SAMP	RA-015-031721	Soil	Ni-63	pCi/g	0.113	1.79	1.79	1.96	1.49	U	3.12	U	60
160-41496-18	SAMP	RA-016-031721	Soil	Ni-63	pCi/g	-1.88	2	2.01	1.96	1.75	U	3.65	U	60
160-41496-2	SAMP	RA-201-031721	Soil	Ni-63	pCi/g	-0.407	2.06	2.06	1.96	1.74	U	3.64	U	60
160-41496-3	SAMP	RA-002-031721	Soil	Ni-63	pCi/g	0.492	2.35	2.35	1.96	1.94	U	4.06	U	60
160-41496-4	SAMP	RA-003-031721	Soil	Ni-63	pCi/g	-1.27	1.8	1.8	1.96	1.55	U	3.25	U	60
160-41496-5	SAMP	RA-004-031721	Soil	Ni-63	pCi/g	-1.68	1.86	1.87	1.96	1.63	U	3.4	U	60
160-41496-6	SAMP	RA-005-031721	Soil	Ni-63	pCi/g	-0.443	2.02	2.02	1.96	1.71	U	3.56	U	60
160-41496-7	SAMP	RA-006-031721	Soil	Ni-63	pCi/g	-0.0949	2.03	2.03	1.96	1.70	U	3.55	U	60
160-41496-8	SAMP	RA-007-031721	Soil	Ni-63	pCi/g	0.0109	1.96	1.96	1.96	1.64	U	3.42	U	60
160-41496-9	SAMP	RA-008-031721	Soil	Ni-63	pCi/g	-0.0743	2.17	2.17	1.96	1.82	U	3.8	U	60
LCS 160-504117/2-A	QC_LCS	LCS 160-504117/2-A	Soil	Ni-63	pCi/g	20.49	1.86	2.8	1.96	0.939		1.96		60
MB 160-504117/1-A	QC_BLK	MB 160-504117/1-A	Soil	Ni-63	pCi/g	0.2849	1.14	1.14	1.96	0.940	U	1.96	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-41700-1	SAMP	RA-017-041321	Soil	Sr-90	pCi/g	0.199	0.151	0.152	1.96	0.108		0.241	U	200
160-41700-2	SAMP	RA-018-041321	Soil	Sr-90	pCi/g	-0.0273	0.179	0.179	1.96	0.152	U	0.332	U	200
160-41700-3	SAMP	RA-019-041321	Soil	Sr-90	pCi/g	0.334	0.199	0.2	1.96	0.140		0.307		200
160-41700-4	SAMP	RA-020-041321	Soil	Sr-90	pCi/g	-0.0286	0.162	0.162	1.96	0.139	U	0.302	U	200
160-41700-5	SAMP	RA-220-041321	Soil	Sr-90	pCi/g	0.0704	0.181	0.181	1.96	0.146	U	0.319	U	200
160-41700-6	SAMP	RA-021-041321	Soil	Sr-90	pCi/g	0.106	0.183	0.183	1.96	0.145	U	0.318	U	200
160-41700-7	SAMP	RA-022-041321	Soil	Sr-90	pCi/g	-0.00379	0.178	0.178	1.96	0.149	U	0.327	U	200
160-41700-7 DU	QC_DUP	160-41700-7 DU	Soil	Sr-90	pCi/g	0.127	0.176	0.176	1.96	0.137	U	0.300	U	200
LCS 160-507507/1-A	QC_LCS	LCS 160-507507/1-A	Soil	Sr-90	pCi/g	7.876	0.538	0.831	1.96	0.129		0.284		200
MB 160-507507/11-A	QC_BLK	MB 160-507507/11-A	Soil	Sr-90	pCi/g	0.2521	0.187	0.188	1.96	0.136		0.299	U	200
160-41700-1	SAMP	RA-017-041321	Soil	Am-241	pCi/g	0.0168	0.0396	0.0396	1.96	0.0268	U	0.079	U	240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	Am-241	pCi/g	-0.02272	0.0386	0.0387	1.96	0.0395	U	0.104	U	240
160-41700-2	SAMP	RA-018-041321	Soil	Am-241	pCi/g	-0.00725	0.0284	0.0284	1.96	0.0267	U	0.0751	U	240
160-41700-3	SAMP	RA-019-041321	Soil	Am-241	pCi/g	0.00207	0.0443	0.0443	1.96	0.0366	U	0.0980	U	240
160-41700-4	SAMP	RA-020-041321	Soil	Am-241	pCi/g	0.0538	0.0513	0.0517	1.96	0.0264		0.0767	U	240
160-41700-5	SAMP	RA-220-041321	Soil	Am-241	pCi/g	-0.0234	0.0325	0.0326	1.96	0.0352	U	0.0938	U	240
160-41700-6	SAMP	RA-021-041321	Soil	Am-241	pCi/g	0.00585	0.0232	0.0232	1.96	0.0160	U	0.0555	U	240
160-41700-7	SAMP	RA-022-041321	Soil	Am-241	pCi/g	0.00188	0.016	0.016	1.96	0.0120	U	0.0464	U	240
LCS 160-508030/2-A	QC_LCS	LCS 160-508030/2-A	Soil	Am-241	pCi/g	3.617	0.326	0.508	1.96	0.0390		0.101		240
MB 160-508030/1-A	QC_BLK	MB 160-508030/1-A	Soil	Am-241	pCi/g	-0.01988	0.0477	0.0478	1.96	0.0451	U	0.114	U	240
160-41700-1	SAMP	RA-017-041321	Soil	Pu-238	pCi/g	-0.0293	0.0239	0.0241	1.96	0.0327	U	0.0905	U	240
160-41700-1	SAMP	RA-017-041321	Soil	Pu-239/Pu-240	pCi/g	0.0021	0.0365	0.0365	1.96	0.0299	U	0.0849	U	240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	Pu-238	pCi/g	0.008104	0.0297	0.0297	1.96	0.0211	U	0.0665	U	240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	Pu-239/Pu-240	pCi/g	0.002028	0.0173	0.0173	1.96	0.0129	U	0.0502	U	240
160-41700-2	SAMP	RA-018-041321	Soil	Pu-238	pCi/g	-0.0101	0.0266	0.0266	1.96	0.0268	U	0.0778	U	240
160-41700-2	SAMP	RA-018-041321	Soil	Pu-239/Pu-240	pCi/g	0.0364	0.0359	0.036	1.96	0.0105		0.0453	U	240
160-41700-3	SAMP	RA-019-041321	Soil	Pu-238	pCi/g	0.00215	0.0419	0.0419	1.96	0.0344	U	0.0946	U	240
160-41700-3	SAMP	RA-019-041321	Soil	Pu-239/Pu-240	pCi/g	-0.0365	0.0174	0.0176	1.96	0.0326	U	0.0910	U	240
160-41700-4	SAMP	RA-020-041321	Soil	Pu-238	pCi/g	-0.00596	0.0255	0.0255	1.96	0.0242	U	0.0723	U	240
160-41700-4	SAMP	RA-020-041321	Soil	Pu-239/Pu-240	pCi/g	0.0119	0.0286	0.0287	1.96	0.0179	U	0.0597	U	240
160-41700-5	SAMP	RA-220-041321	Soil	Pu-238	pCi/g	0.0262	0.0353	0.0353	1.96	0.0160		0.0583	U	240
160-41700-5	SAMP	RA-220-041321	Soil	Pu-239/Pu-240	pCi/g	0.0131	0.025	0.025	1.96	0.0114		0.0489	U	240
160-41700-6	SAMP	RA-021-041321	Soil	Pu-238	pCi/g	0.0021	0.0316	0.0316	1.96	0.0256	U	0.0765	U	240
160-41700-6	SAMP	RA-021-041321	Soil	Pu-239/Pu-240	pCi/g	-0.00421	0.0193	0.0193	1.96	0.0189	U	0.0631	U	240
160-41700-7	SAMP	RA-022-041321	Soil	Pu-238	pCi/g	-0.0148	0.0109	0.011	1.96	0.0205	U	0.0664	U	240
160-41700-7	SAMP	RA-022-041321	Soil	Pu-239/Pu-240	pCi/g	-0.0106	0.00926	0.0093	1.96	0.0174	U	0.0601	U	240
LCS 160-508031/2-A	QC_LCS	LCS 160-508031/2-A	Soil	Pu-238	pCi/g	4.886	0.39	0.56	1.96	0.0235		0.0711		240
LCS 160-508031/2-A	QC_LCS	LCS 160-508031/2-A	Soil	Pu-239/Pu-240	pCi/g	5.288	0.406	0.595	1.96	0.0166		0.0574		240
MB 160-508031/1-A	QC_BLK	MB 160-508031/1-A	Soil	Pu-238	pCi/g	-0.004258	0.027	0.027	1.96	0.0248	U	0.0751	U	240
MB 160-508031/1-A	QC_BLK	MB 160-508031/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.002131	0.0191	0.0191	1.96	0.0175	U	0.0606	U	240
160-41700-1	SAMP	RA-017-041321	Soil	U-235/U-236	pCi/g	0.00312	0.0267	0.0267	1.96	0.0199	U	0.0773	U	240
160-41700-1	SAMP	RA-017-041321	Soil	U-238	pCi/g	0.278	0.106	0.109	1.96	0.0206		0.0713		240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	U-233/U-234	pCi/g	0.1788	0.0867	0.088	1.96	0.0283		0.0845		240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	U-235/U-236	pCi/g	-0.002889	0.00566	0.00567	1.96	0.0106	U	0.0559	U	240
160-41700-1 DU	QC_DUP	160-41700-1 DU	Soil	U-238	pCi/g	0.2109	0.0872	0.089	1.96	0.0085		0.0449		240
160-41700-2	SAMP	RA-018-041321	Soil	U-235/U-236	pCi/g	0.0354	0.0401	0.0402	1.96	0.0109		0.0354		240
160-41700-2	SAMP	RA-018-041321	Soil	U-238	pCi/g	0.234	0.0975	0.0993	1.96	0.0261		0.0807		240
160-41700-3	SAMP	RA-019-041321	Soil	U-235/U-236	pCi/g	-0.00979	0.0111	0.0111	1.96	0.0208	U	0.0808	U	240
160-41700-3	SAMP	RA-019-041321	Soil	U-238	pCi/g	0.220	0.094	0.0958	1.96	0.0096		0.0314		240
160-41700-4	SAMP	RA-020-041321	Soil	U-235/U-236	pCi/g	0.0446	0.047	0.0472	1.96	0.0109		0.0576	U	240
160-41700-4	SAMP	RA-020-041321	Soil	U-238	pCi/g	0.131	0.0702	0.071	1.96	0.0088		0.0462		240
160-41700-5	SAMP	RA-220-041321	Soil	U-235/U-236	pCi/g	-0.00574	0.00796	0.00797	1.96	0.0149	U	0.0643	U	240
160-41700-5	SAMP	RA-220-041321	Soil	U-238	pCi/g	0.134	0.0702	0.071	1.96	0.0120		0.0516		240
160-41700-6	SAMP	RA-021-041321	Soil	U-235/U-236	pCi/g	0.0212	0.0403	0.0404	1.96	0.0184		0.0791	U	240
160-41700-6	SAMP	RA-021-041321	Soil	U-238	pCi/g	0.348	0.124	0.127	1.96	0.0104		0.0548		240
160-41700-7	SAMP	RA-022-041321	Soil	U-235/U-236	pCi/g	0.00596	0.0248	0.0248	1.96	0.0155	U	0.0667	U	240
160-41700-7	SAMP	RA-022-041321	Soil	U-238	pCi/g	0.291	0.104	0.107	1.96	0.0124		0.0535		240
LCS 160-508032/2-A	QC_LCS	LCS 160-508032/2-A	Soil	U-233/U-234	pCi/g	6.611	0.543	0.769	1.96	0.0382		0.111		240
LCS 160-508032/2-A	QC_LCS	LCS 160-508032/2-A	Soil	U-238	pCi/g	7.366	0.571	0.833	1.96	0.0150		0.0644		240
MB 160-508032/1-A	QC_BLK	MB 160-508032/1-A	Soil	U-233/U-234	pCi/g	-0.01478	0.011	0.011	1.96	0.0206	U	0.0665	U	240
MB 160-508032/1-A	QC_BLK	MB 160-508032/1-A	Soil	U-235/U-236	pCi/g	-0.002628	0.00515	0.00516	1.96	0.0097	U	0.0509	U	240
MB 160-508032/1-A	QC_BLK	MB 160-508032/1-A	Soil	U-238	pCi/g	0.01686	0.0298	0.0298	1.96	0.0155		0.0563	U	240

160-41700-1	SAMP	RA-017-041321	Soil	Cs-137	pCi/g	-0.00888	0.059	0.059	1.96	0.0488	U	0.107	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Co-60	pCi/g	0.00779	0.0777	0.0777	1.96	0.0390	U	0.0914	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Ra-226	pCi/g	0.168	0.111	0.112	1.96	0.170	U	0.356	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Eu-155	pCi/g	0.124	0.424	0.424	1.96	0.354	U	0.720	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Am-241	pCi/g	0.0845	0.18	0.18	1.96	0.148	U	0.307	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Eu-152	pCi/g	0.121	0.169	0.169	1.96	0.101		0.211	U	30
160-41700-1	SAMP	RA-017-041321	Soil	Eu-154	pCi/g	0.0856	0.0677	0.0683	1.96	0.0649		0.136	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Cs-137	pCi/g	-0.00816	0.107	0.107	1.96	0.0892	U	0.200	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Co-60	pCi/g	-0.0123	0.0588	0.0589	1.96	0.0912	U	0.214	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Ra-226	pCi/g	0.264	0.183	0.185	1.96	0.440	U	0.918	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Eu-155	pCi/g	0.00	0.2	0.2	1.96	0.236	U	0.502	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Am-241	pCi/g	-0.0498	0.316	0.316	1.96	0.264	U	0.551	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Eu-152	pCi/g	0.144	0.379	0.379	1.96	0.151	U	0.324	U	30
160-41700-2	SAMP	RA-018-041321	Soil	Eu-154	pCi/g	0.0458	0.0572	0.0574	1.96	0.125	U	0.267	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Cs-137	pCi/g	0.023	0.091	0.091	1.96	0.0740	U	0.162	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Co-60	pCi/g	-0.0415	0.0916	0.0917	1.96	0.0631	U	0.148	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Ra-226	pCi/g	0.0259	0.199	0.199	1.96	0.165	U	0.355	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Eu-155	pCi/g	0.0303	0.207	0.207	1.96	0.173	U	0.362	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Am-241	pCi/g	0.076	0.11	0.11	1.96	0.0739		0.161	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Eu-152	pCi/g	0.0426	0.0796	0.0797	1.96	0.0950	U	0.202	U	30
160-41700-3	SAMP	RA-019-041321	Soil	Eu-154	pCi/g	0.0688	0.146	0.146	1.96	0.0560		0.120	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Cs-137	pCi/g	-0.0323	0.0528	0.0529	1.96	0.0416	U	0.0907	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Co-60	pCi/g	0.00925	0.0162	0.0163	1.96	0.0225	U	0.0560	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Ra-226	pCi/g	0.237	0.0948	0.0979	1.96	0.0390		0.0911		30
160-41700-4	SAMP	RA-020-041321	Soil	Eu-155	pCi/g	0.00	0.0528	0.0528	1.96	0.229	U	0.469	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Am-241	pCi/g	0.0468	0.103	0.103	1.96	0.0843	U	0.178	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Eu-152	pCi/g	0.114	0.0792	0.08	1.96	0.150	U	0.314	U	30
160-41700-4	SAMP	RA-020-041321	Soil	Eu-154	pCi/g	0.0273	0.0366	0.0367	1.96	0.0479	U	0.101	U	30
160-41700-5	SAMP	RA-220-041321	Soil	Cs-137	pCi/g	0.0313	0.0884	0.0885	1.96	0.0716	U	0.156	U	30
160-41700-5	SAMP	RA-220-041321	Soil	Co-60	pCi/g	0.0403	0.0512	0.0514	1.96	0.0355		0.0888	U	30
160-41700-5	SAMP	RA-220-041321	Soil	Ra-226	pCi/g	0.463	0.171	0.179	1.96	0.0671		0.156		30
160-41700-5	SAMP	RA-220-041321	Soil	Eu-155	pCi/g	0.0401	0.115	0.115	1.96	0.354	U	0.723	U	30
160-41700-5	SAMP	RA-220-041321	Soil	Am-241	pCi/g	0.0106	0.198	0.198	1.96	0.166	U	0.345	U	30
160-41700-5	SAMP	RA-220-041321	Soil	Eu-152	pCi/g	0.297	0.125	0.129	1.96	0.135		0.282		30
160-41700-5	SAMP	RA-220-041321	Soil	Eu-154	pCi/g	0.0543	0.136	0.136	1.96	0.0963	U	0.201	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Cs-137	pCi/g	-0.0212	0.0863	0.0864	1.96	0.0721	U	0.159	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Co-60	pCi/g	0.00161	0.00284	0.00285	1.96	0.0653	U	0.153	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Ra-226	pCi/g	0.429	0.136	0.142	1.96	0.0422		0.110		30
160-41700-6	SAMP	RA-021-041321	Soil	Eu-155	pCi/g	0.0614	0.195	0.195	1.96	0.160	U	0.337	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Am-241	pCi/g	-0.0911	0.153	0.154	1.96	0.117	U	0.249	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Eu-152	pCi/g	0.159	0.156	0.157	1.96	0.0955		0.203	U	30
160-41700-6	SAMP	RA-021-041321	Soil	Eu-154	pCi/g	0.128	0.164	0.164	1.96	0.0627		0.134	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Cs-137	pCi/g	0.030	0.0492	0.0493	1.96	0.0380	U	0.0848	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Co-60	pCi/g	0.0295	0.0569	0.057	1.96	0.0265		0.0657	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Ra-226	pCi/g	0.438	0.12	0.128	1.96	0.0474		0.110		30
160-41700-7	SAMP	RA-022-041321	Soil	Eu-155	pCi/g	0.0839	0.275	0.275	1.96	0.229	U	0.470	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Am-241	pCi/g	-0.0214	0.156	0.156	1.96	0.0984	U	0.207	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Eu-152	pCi/g	0.0611	0.104	0.105	1.96	0.0808	U	0.170	U	30
160-41700-7	SAMP	RA-022-041321	Soil	Eu-154	pCi/g	0.190	0.0743	0.0768	1.96	0.0529		0.112		30
LCS 160-507122/2-A	QC_LCS	LCS 160-507122/2-A	Soil	Cs-137	pCi/g	25.33	0.556	2.64	1.96	0.0838		0.175		30
LCS 160-507122/2-A	QC_LCS	LCS 160-507122/2-A	Soil	Co-60	pCi/g	8.392	0.264	0.867	1.96	0.0310		0.0733		30
LCS 160-507122/2-A	QC_LCS	LCS 160-507122/2-A	Soil	Am-241	pCi/g	92.57	1.45	9.53	1.96	0.525		1.06		30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Cs-137	pCi/g	0.008714	0.0859	0.0859	1.96	0.0713	U	0.158	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Co-60	pCi/g	-0.08775	0.151	0.152	1.96	0.0744	U	0.170	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Ra-226	pCi/g	0.01759	0.215	0.215	1.96	0.179	U	0.383	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Eu-155	pCi/g	0.0352	0.0888	0.0889	1.96	0.272	U	0.564	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Am-241	pCi/g	0.06213	0.147	0.148	1.96	0.120	U	0.255	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Eu-152	pCi/g	0.1099	0.135	0.136	1.96	0.0829		0.180	U	30
MB 160-507122/1-A	QC_BLK	MB 160-507122/1-A	Soil	Eu-154	pCi/g	0.01495	0.0568	0.0568	1.96	0.0666	U	0.143	U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43079-1	SAMP	FSS-001-081121	Soil	Sr-90	pCi/g	0.0667	0.158	0.158	1.96	0.126	U	0.278	U	200
160-43079-10	SAMP	FSS-010-081121	Soil	Sr-90	pCi/g	0.0605	0.191	0.191	1.96	0.156	U	0.338	U	200
160-43079-11	SAMP	FSS-011-081121	Soil	Sr-90	pCi/g	0.218	0.197	0.198	1.96	0.149	U	0.324	U	200
160-43079-12	SAMP	FSS-012-081121	Soil	Sr-90	pCi/g	0.0588	0.186	0.186	1.96	0.151	U	0.33	U	200
160-43079-13	SAMP	FSS-013-081221	Soil	Sr-90	pCi/g	0.0888	0.204	0.204	1.96	0.164	U	0.357	U	200
160-43079-14	SAMP	FSS-014-081221	Soil	Sr-90	pCi/g	0.138	0.205	0.206	1.96	0.162	U	0.352	U	200
160-43079-15	SAMP	FSS-015-081221	Soil	Sr-90	pCi/g	0.101	0.175	0.175	1.96	0.139	U	0.303	U	200
160-43079-16	SAMP	FSS-016-081221	Soil	Sr-90	pCi/g	0.082	0.177	0.177	1.96	0.141	U	0.31	U	200
160-43079-2	SAMP	FSS-002-081121	Soil	Sr-90	pCi/g	0.117	0.165	0.165	1.96	0.128	U	0.282	U	200
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	Sr-90	pCi/g	0.8691	0.282	0.291	1.96	0.186		0.399		200
160-43079-3	SAMP	FSS-003-081121	Soil	Sr-90	pCi/g	-0.166	0.172	0.172	1.96	0.157	U	0.34	U	200
160-43079-4	SAMP	FSS-004-081121	Soil	Sr-90	pCi/g	0.0553	0.177	0.177	1.96	0.144	U	0.314	U	200
160-43079-5	SAMP	FSS-005-081121	Soil	Sr-90	pCi/g	0.0981	0.185	0.185	1.96	0.148	U	0.321	U	200
160-43079-7	SAMP	FSS-007-081121	Soil	Sr-90	pCi/g	0.0998	0.193	0.193	1.96	0.154	U	0.335	U	200
160-43079-8	SAMP	FSS-008-081121	Soil	Sr-90	pCi/g	-0.0228	0.205	0.205	1.96	0.174	U	0.376	U	200
160-43079-9	SAMP	FSS-009-081121	Soil	Sr-90	pCi/g	0.174	0.214	0.215	1.96	0.166	U	0.362	U	200
LCS 160-524352/1-A	QC_LCS	LCS 160-524352/1-A	Soil	Sr-90	pCi/g	7.574	0.525	0.804	1.96	0.129		0.284		200
MB 160-524352/23-A	QC_BLK	MB 160-524352/23-A	Soil	Sr-90	pCi/g	-0.00982	0.147	0.147	1.96	0.124	U	0.273	U	200
160-43079-1	SAMP	FSS-001-081121	Soil	H-3	pCi/g	0.127	0.237	0.237	1.96	0.187	U	0.413	U	20
160-43079-10	SAMP	FSS-010-081121	Soil	H-3	pCi/g	0.146	0.241	0.242	1.96	0.190	U	0.419	U	20
160-43079-11	SAMP	FSS-011-081121	Soil	H-3	pCi/g	-0.0852	0.218	0.218	1.96	0.191	U	0.422	U	20
160-43079-12	SAMP	FSS-012-081121	Soil	H-3	pCi/g	0.0376	0.228	0.228	1.96	0.188	U	0.415	U	20
160-43079-13	SAMP	FSS-013-081221	Soil	H-3	pCi/g	0.0547	0.225	0.225	1.96	0.183	U	0.405	U	20
160-43079-14	SAMP	FSS-014-081221	Soil	H-3	pCi/g	0.211	0.246	0.246	1.96	0.187	U	0.414	U	20
160-43079-15	SAMP	FSS-015-081221	Soil	H-3	pCi/g	-0.0524	0.216	0.216	1.96	0.185		0.409	U	20
160-43079-15 MS	QC_MS	160-43079-15 MS	Soil	H-3	pCi/g	6.999	0.629	0.872	1.96	0.187	U	0.413		20
160-43079-16	SAMP	FSS-016-081221	Soil	H-3	pCi/g	0.204	0.241	0.242	1.96	0.183	U	0.404	U	20
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	H-3	pCi/g	0.04912	0.232	0.232	1.96	0.190	U	0.419	U	20
160-43079-2	SAMP	FSS-002-081121	Soil	H-3	pCi/g	0.193	0.241	0.242	1.96	0.184	U	0.407	U	20
160-43079-3	SAMP	FSS-003-081121	Soil	H-3	pCi/g	0.0115	0.229	0.229	1.96	0.191	U	0.422	U	20
160-43079-4	SAMP	FSS-004-081121	Soil	H-3	pCi/g	0.222	0.244	0.245	1.96	0.185	U	0.407	U	20
160-43079-5	SAMP	FSS-005-081121	Soil	H-3	pCi/g	0.0802	0.234	0.235	1.96	0.190		0.418	U	20
160-43079-6	SAMP	FSS-006-081121	Soil	H-3	pCi/g	0.139	0.237	0.237	1.96	0.186	U	0.411	U	20
160-43079-7	SAMP	FSS-007-081121	Soil	H-3	pCi/g	0.0976	0.24	0.24	1.96	0.193	U	0.426	U	20
160-43079-8	SAMP	FSS-008-081121	Soil	H-3	pCi/g	-0.0474	0.22	0.22	1.96	0.189	U	0.418	U	20
160-43079-9	SAMP	FSS-009-081121	Soil	H-3	pCi/g	0.0938	0.231	0.232	1.96	0.185	U	0.409	U	20
LCS 160-524308/2-A	QC_LCS	LCS 160-524308/2-A	Soil	H-3	pCi/g	7.425	0.653	0.914	1.96	0.191	U	0.42		20
MB 160-524308/1-A	QC_BLK	MB 160-524308/1-A	Soil	H-3	pCi/g	0.3495	0.253	0.255	1.96	0.181		0.399	U	20
160-43079-1	SAMP	FSS-001-081121	Soil	Pu-238	pCi/g	-0.0125	0.0208	0.0208	1.96	0.0242		0.0734	U	240
160-43079-1	SAMP	FSS-001-081121	Soil	Pu-239/Pu-240	pCi/g	0.00417	0.0252	0.0252	1.96	0.0188	U	0.0626	U	240
160-43079-10	SAMP	FSS-010-081121	Soil	Pu-238	pCi/g	-0.00238	0.00466	0.00466	1.96	0.0087	U	0.046	U	240
160-43079-10	SAMP	FSS-010-081121	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00466	0.00466	1.96	0.0087	U	0.0285	U	240
160-43079-11	SAMP	FSS-011-081121	Soil	Pu-238	pCi/g	-0.00729	0.00825	0.00828	1.96	0.0155	U	0.0602	U	240
160-43079-11	SAMP	FSS-011-081121	Soil	Pu-239/Pu-240	pCi/g	-0.00487	0.00675	0.00676	1.96	0.0127	U	0.0545	U	240
160-43079-12	SAMP	FSS-012-081121	Soil	Pu-238	pCi/g	0.00699	0.0188	0.0188	1.96	0.0086	U	0.0451	U	240
160-43079-12	SAMP	FSS-012-081121	Soil	Pu-239/Pu-240	pCi/g	-0.00233	0.00457	0.00458	1.96	0.0086		0.0452	U	240
160-43079-13	SAMP	FSS-013-081221	Soil	Pu-238	pCi/g	-0.00219	0.00429	0.0043	1.96	0.0081	U	0.0424	U	240
160-43079-13	SAMP	FSS-013-081221	Soil	Pu-239/Pu-240	pCi/g	-0.00219	0.0043	0.0043	1.96	0.0081		0.0424	U	240
160-43079-14	SAMP	FSS-014-081221	Soil	Pu-238	pCi/g	-0.00946	0.00927	0.0093	1.96	0.0174		0.0632	U	240
160-43079-14	SAMP	FSS-014-081221	Soil	Pu-239/Pu-240	pCi/g	-0.00237	0.00464	0.00464	1.96	0.0087	U	0.0458	U	240
160-43079-15	SAMP	FSS-015-081221	Soil	Pu-238	pCi/g	0.00433	0.018	0.018	1.96	0.0113		0.0485	U	240
160-43079-15	SAMP	FSS-015-081221	Soil	Pu-239/Pu-240	pCi/g	0.0065	0.0258	0.0258	1.96	0.0178	U	0.0616	U	240
160-43079-16	SAMP	FSS-016-081221	Soil	Pu-238	pCi/g	-0.00478	0.0303	0.0303	1.96	0.0278		0.0842	U	240
160-43079-16	SAMP	FSS-016-081221	Soil	Pu-239/Pu-240	pCi/g	-0.00717	0.00812	0.00814	1.96	0.0152	U	0.0591	U	240
160-43079-2	SAMP	FSS-002-081121	Soil	Pu-238	pCi/g	-0.0072	0.00998	0.00999	1.96	0.0187	U	0.0806	U	240
160-43079-2	SAMP	FSS-002-081121	Soil	Pu-239/Pu-240	pCi/g	0.00721	0.03	0.03	1.96	0.0187	U	0.0807	U	240
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	Pu-238	pCi/g	0.00	0.00503	0.00503	1.96	0.0094	U	0.0308	U	240
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00503	0.00503	1.96	0.0094	U	0.0308	U	240
160-43079-3	SAMP	FSS-003-081121	Soil	Pu-238	pCi/g	-0.0278	0.0173	0.0174	1.96	0.0324		0.0982	U	240
160-43079-3	SAMP	FSS-003-081121	Soil	Pu-239/Pu-240	pCi/g	-0.00557	0.0256	0.0256	1.96	0.0251		0.0836	U	240
160-43079-4	SAMP	FSS-004-081121	Soil	Pu-238	pCi/g	-0.053	0.0227	0.0231	1.96	0.0426	U	0.115	U	240
160-43079-4	SAMP	FSS-004-081121	Soil	Pu-239/Pu-240	pCi/g	-0.0228	0.0149	0.015	1.96	0.0279	U	0.0861	U	240

160-43079-5	SAMP	FSS-005-081121	Soil	Pu-238	pCi/g	0.00406	0.0245	0.0245	1.96	0.0183	U	0.0609	U	240
160-43079-5	SAMP	FSS-005-081121	Soil	Pu-239/Pu-240	pCi/g	0.00609	0.0164	0.0164	1.96	0.0075	U	0.0393	U	240
160-43079-6	SAMP	FSS-006-081121	Soil	Pu-238	pCi/g	0.00471	0.0285	0.0285	1.96	0.0212	U	0.0708	U	240
160-43079-6	SAMP	FSS-006-081121	Soil	Pu-239/Pu-240	pCi/g	-0.00236	0.00462	0.00463	1.96	0.0087	U	0.0457	U	240
160-43079-7	SAMP	FSS-007-081121	Soil	Pu-238	pCi/g	-0.00292	0.0262	0.0262	1.96	0.0240	U	0.0831	U	240
160-43079-7	SAMP	FSS-007-081121	Soil	Pu-239/Pu-240	pCi/g	0.00292	0.025	0.025	1.96	0.0186	U	0.0724	U	240
160-43079-8	SAMP	FSS-008-081121	Soil	Pu-238	pCi/g	-0.00309	0.00607	0.00607	1.96	0.0114	U	0.0599	U	240
160-43079-8	SAMP	FSS-008-081121	Soil	Pu-239/Pu-240	pCi/g	-0.0031	0.00607	0.00608	1.96	0.0114	U	0.06	U	240
160-43079-9	SAMP	FSS-009-081121	Soil	Pu-238	pCi/g	-0.00195	0.0176	0.0176	1.96	0.0161	U	0.0556	U	240
160-43079-9	SAMP	FSS-009-081121	Soil	Pu-239/Pu-240	pCi/g	-0.00587	0.00664	0.00666	1.96	0.0125	U	0.0484	U	240
160-43124-D-6-E	SAMP	160-43124-D-6-E	Soil	Pu-238	pCi/g	0.0175	0.0364	0.0364	1.96	0.0228	U	0.0718	U	240
160-43124-D-6-E	SAMP	160-43124-D-6-E	Soil	Pu-239/Pu-240	pCi/g	-0.00219	0.0043	0.0043	1.96	0.0081	U	0.0424	U	240
160-43124-D-6-F DU	QC_DUP	160-43124-D-6-F DU	Soil	Pu-238	pCi/g	0.007388	0.0199	0.0199	1.96	0.0091	U	0.0477	U	240
160-43124-D-6-F DU	QC_DUP	160-43124-D-6-F DU	Soil	Pu-239/Pu-240	pCi/g	-0.00493	0.00683	0.00684	1.96	0.0128	U	0.0552	U	240
LCS 160-524624/2-A	QC_LCS	LCS 160-524624/2-A	Soil	Pu-238	pCi/g	5.825	0.585	0.756	1.96	0.1150	U	0.273		240
LCS 160-524624/2-A	QC_LCS	LCS 160-524624/2-A	Soil	Pu-239/Pu-240	pCi/g	5.892	0.596	0.768	1.96	0.1395	U	0.322		240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-238	pCi/g	5.059	0.39	0.571	1.96	0.0161	U	0.0555		240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-239/Pu-240	pCi/g	5.285	0.398	0.59	1.96	0.0072	U	0.0235		240
MB 160-524624/1-A	QC_BLK	MB 160-524624/1-A	Soil	Pu-238	pCi/g	-0.00243	0.00476	0.00476	1.96	0.0089	U	0.047	U	240
MB 160-524624/1-A	QC_BLK	MB 160-524624/1-A	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00476	0.00476	1.96	0.0089	U	0.0291	U	240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-238	pCi/g	-0.00412	0.00571	0.00572	1.96	0.0107	U	0.0461	U	240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.00825	0.00808	0.00811	1.96	0.0152	U	0.0551	U	240
160-43079-1	SAMP	FSS-001-081121	Soil	U-233/U-234	pCi/g	0.127	0.0714	0.0722	1.96	0.0281	U	0.0807		240
160-43079-1	SAMP	FSS-001-081121	Soil	U-235/U-236	pCi/g	-0.0127	0.0111	0.0112	1.96	0.0209	U	0.0723	U	240
160-43079-1	SAMP	FSS-001-081121	Soil	U-238	pCi/g	0.104	0.0578	0.0584	1.96	0.0075	U	0.0395		240
160-43079-10	SAMP	FSS-010-081121	Soil	U-235/U-236	pCi/g	0.0236	0.0327	0.0328	1.96	0.0108	U	0.0354	U	240
160-43079-10	SAMP	FSS-010-081121	Soil	U-238	pCi/g	0.421	0.125	0.129	1.96	0.0123	U	0.053		240
160-43079-11	SAMP	FSS-011-081121	Soil	U-235/U-236	pCi/g	0.00	0.00583	0.00583	1.96	0.0109	U	0.0357	U	240
160-43079-11	SAMP	FSS-011-081121	Soil	U-238	pCi/g	0.327	0.111	0.114	1.96	0.0152	U	0.059		240
160-43079-12	SAMP	FSS-012-081121	Soil	U-235/U-236	pCi/g	0.0418	0.0475	0.0476	1.96	0.0155	U	0.0668	U	240
160-43079-12	SAMP	FSS-012-081121	Soil	U-238	pCi/g	0.684	0.159	0.169	1.96	0.0124	U	0.0536		240
160-43079-13	SAMP	FSS-013-081221	Soil	U-233/U-234	pCi/g	0.597	0.146	0.154	1.96	0.0120	U	0.0518		240
160-43079-13	SAMP	FSS-013-081221	Soil	U-235/U-236	pCi/g	0.0576	0.0505	0.0507	1.96	0.0106	U	0.0345		240
160-43079-13	SAMP	FSS-013-081221	Soil	U-238	pCi/g	0.573	0.143	0.15	1.96	0.0085	U	0.0277		240
160-43079-14	SAMP	FSS-014-081221	Soil	U-235/U-236	pCi/g	-0.00281	0.00551	0.00552	1.96	0.0103	U	0.0545	U	240
160-43079-14	SAMP	FSS-014-081221	Soil	U-238	pCi/g	0.142	0.0736	0.0745	1.96	0.0186	U	0.0642		240
160-43079-15	SAMP	FSS-015-081221	Soil	U-235/U-236	pCi/g	-0.00257	0.00505	0.00505	1.96	0.0095		0.0498	U	240
160-43079-15	SAMP	FSS-015-081221	Soil	U-238	pCi/g	0.147	0.0711	0.0721	1.96	0.0170		0.0587		240
160-43079-16	SAMP	FSS-016-081221	Soil	U-235/U-236	pCi/g	0.00	0.00552	0.00552	1.96	0.0104		0.0338	U	240
160-43079-16	SAMP	FSS-016-081221	Soil	U-238	pCi/g	0.108	0.0613	0.0619	1.96	0.0083		0.0271		240
160-43079-2	SAMP	FSS-002-081121	Soil	U-235/U-236	pCi/g	-0.00468	0.00917	0.00917	1.96	0.0172	U	0.0905	U	240
160-43079-2	SAMP	FSS-002-081121	Soil	U-238	pCi/g	0.113	0.09	0.0905	1.96	0.0338	U	0.113		240
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	U-233/U-234	pCi/g	0.1539	0.0883	0.0892	1.96	0.0359	U	0.102		240
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	U-235/U-236	pCi/g	0.00	0.00615	0.00615	1.96	0.0115	U	0.0377	U	240
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	U-238	pCi/g	0.1359	0.0742	0.075	1.96	0.0131		0.0564		240
160-43079-3	SAMP	FSS-003-081121	Soil	U-235/U-236	pCi/g	0.0205	0.039	0.0391	1.96	0.0178	U	0.0765	U	240
160-43079-3	SAMP	FSS-003-081121	Soil	U-238	pCi/g	0.255	0.106	0.108	1.96	0.0175		0.0678		240
160-43079-4	SAMP	FSS-004-081121	Soil	U-235/U-236	pCi/g	-0.00282	0.00552	0.00553	1.96	0.0104		0.0546	U	240
160-43079-4	SAMP	FSS-004-081121	Soil	U-238	pCi/g	0.165	0.0776	0.0788	1.96	0.0144		0.0559		240
160-43079-5	SAMP	FSS-005-081121	Soil	U-233/U-234	pCi/g	0.135	0.0738	0.0746	1.96	0.0210	U	0.0698		240
160-43079-5	SAMP	FSS-005-081121	Soil	U-235/U-236	pCi/g	-0.00289	0.00567	0.00568	1.96	0.0106		0.056	U	240
160-43079-5	SAMP	FSS-005-081121	Soil	U-238	pCi/g	0.225	0.0913	0.0932	1.96	0.0148		0.0574		240
160-43079-6	SAMP	FSS-006-081121	Soil	U-235/U-236	pCi/g	0.0191	0.0389	0.0389	1.96	0.0224		0.0775	U	240
160-43079-6	SAMP	FSS-006-081121	Soil	U-238	pCi/g	0.155	0.0776	0.0787	1.96	0.0241		0.0744		240
160-43079-7	SAMP	FSS-007-081121	Soil	U-235/U-236	pCi/g	0.00289	0.0354	0.0354	1.96	0.0281		0.091	U	240
160-43079-7	SAMP	FSS-007-081121	Soil	U-238	pCi/g	0.165	0.0799	0.081	1.96	0.0191		0.066		240
160-43079-8	SAMP	FSS-008-081121	Soil	U-235/U-236	pCi/g	-0.00673	0.00932	0.00934	1.96	0.0175	U	0.0753	U	240
160-43079-8	SAMP	FSS-008-081121	Soil	U-238	pCi/g	0.248	0.101	0.103	1.96	0.0099		0.0324		240
160-43079-9	SAMP	FSS-009-081121	Soil	U-233/U-234	pCi/g	0.148	0.0688	0.0698	1.96	0.0171	U	0.0569		240
160-43079-9	SAMP	FSS-009-081121	Soil	U-235/U-236	pCi/g	0.0165	0.0266	0.0266	1.96	0.0087		0.0457	U	240
160-43079-9	SAMP	FSS-009-081121	Soil	U-238	pCi/g	0.053	0.0426	0.0429	1.96	0.0139	U	0.0506		240
160-43124-D-6-K	SAMP	160-43124-D-6-K	Soil	U-233/U-234	pCi/g	0.372	0.121	0.124	1.96	0.0248		0.0783		240
160-43124-D-6-K	SAMP	160-43124-D-6-K	Soil	U-235/U-236	pCi/g	-0.00297	0.00582	0.00583	1.96	0.0109	U	0.0575	U	240

160-43124-D-6-K	SAMP	160-43124-D-6-K	Soil	U-238	pCi/g	0.248	0.0952	0.0974	1.96	0.0088		0.0286		240
160-43124-D-6-L DU	QC_DUP	160-43124-D-6-L DU	Soil	U-233/U-234	pCi/g	0.2026	0.0927	0.0942	1.96	0.0168		0.0651		240
160-43124-D-6-L DU	QC_DUP	160-43124-D-6-L DU	Soil	U-235/U-236	pCi/g	0.01964	0.0374	0.0375	1.96	0.0170	U	0.0734	U	240
160-43124-D-6-L DU	QC_DUP	160-43124-D-6-L DU	Soil	U-238	pCi/g	0.1549	0.0799	0.0809	1.96	0.0097		0.0508		240
LCS 160-524626/2-A	QC_LCS	LCS 160-524626/2-A	Soil	U-233/U-234	pCi/g	6.892	0.541	0.784	1.96	0.0248		0.0826		240
LCS 160-524626/2-A	QC_LCS	LCS 160-524626/2-A	Soil	U-238	pCi/g	6.673	0.531	0.764	1.96	0.0226		0.0781		240
LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-233/U-234	pCi/g	5.631	0.426	0.629	1.96	0.0188	U	0.0627		240
LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-238	pCi/g	6.623	0.461	0.714	1.96	0.0172		0.0593		240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-233/U-234	pCi/g	-0.0051	0.0394	0.0394	1.96	0.0351		0.101	U	240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-235/U-236	pCi/g	-0.02857	0.0187	0.0188	1.96	0.0350	U	0.108	U	240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-238	pCi/g	-0.00509	0.00706	0.00707	1.96	0.0132		0.057	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-233/U-234	pCi/g	0.01627	0.0288	0.0288	1.96	0.0150	U	0.0543	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-235/U-236	pCi/g	0.007594	0.0205	0.0205	1.96	0.0093		0.049	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-238	pCi/g	-0.00203	0.0182	0.0182	1.96	0.0167	U	0.0578	U	240
160-43079-1	SAMP	FSS-001-081121	Soil	C-14	pCi/g	0.467	0.835	0.836	1.96	0.668		1.42	U	20
160-43079-10	SAMP	FSS-010-081121	Soil	C-14	pCi/g	-0.0944	0.852	0.852	1.96	0.714	U	1.51	U	20
160-43079-11	SAMP	FSS-011-081121	Soil	C-14	pCi/g	0.279	0.917	0.918	1.96	0.747		1.58	U	20
160-43079-12	SAMP	FSS-012-081121	Soil	C-14	pCi/g	0.405	0.855	0.856	1.96	0.692		1.47	U	20
160-43079-13	SAMP	FSS-013-081221	Soil	C-14	pCi/g	0.392	0.854	0.855	1.96	0.687		1.46	U	20
160-43079-14	SAMP	FSS-014-081221	Soil	C-14	pCi/g	-0.0466	0.766	0.766	1.96	0.638		1.35	U	20
160-43079-15	SAMP	FSS-015-081221	Soil	C-14	pCi/g	0.553	0.896	0.898	1.96	0.718		1.52	U	20
160-43079-16	SAMP	FSS-016-081221	Soil	C-14	pCi/g	0.587	0.856	0.859	1.96	0.686	U	1.45	U	20
160-43079-2	SAMP	FSS-002-081121	Soil	C-14	pCi/g	0.491	0.86	0.861	1.96	0.694		1.47	U	20
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	C-14	pCi/g	0.2938	0.814	0.815	1.96	0.665		1.41	U	20
160-43079-3	SAMP	FSS-003-081121	Soil	C-14	pCi/g	-0.289	0.856	0.856	1.96	0.734		1.56	U	20
160-43079-3 MS	QC_MS	160-43079-3 MS	Soil	C-14	pCi/g	75.08	2.86	8.44	1.96	0.657		1.39		20
160-43079-4	SAMP	FSS-004-081121	Soil	C-14	pCi/g	0.296	0.906	0.907	1.96	0.746		1.58	U	20
160-43079-5	SAMP	FSS-005-081121	Soil	C-14	pCi/g	0.986	0.935	0.941	1.96	0.724		1.53	U	20
160-43079-7	SAMP	FSS-007-081121	Soil	C-14	pCi/g	0.635	0.826	0.829	1.96	0.655		1.39	U	20
160-43079-8	SAMP	FSS-008-081121	Soil	C-14	pCi/g	0.245	0.823	0.823	1.96	0.672		1.42	U	20
160-43079-9	SAMP	FSS-009-081121	Soil	C-14	pCi/g	0.187	0.74	0.74	1.96	0.604	U	1.28	U	20
LCS 160-526059/2-A	QC_LCS	LCS 160-526059/2-A	Soil	C-14	pCi/g	82.89	3.25	9.35	1.96	0.761	U	1.61		20
MB 160-526059/1-A	QC_BLK	MB 160-526059/1-A	Soil	C-14	pCi/g	0.6982	0.962	0.965	1.96	0.769	U	1.63	U	20
160-43079-1	SAMP	FSS-001-081121	Soil	Cs-137	pCi/g	-0.00571	0.0747	0.0747	1.96	0.0624		0.135	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Co-60	pCi/g	0.00362	0.00227	0.0023	1.96	0.0505	U	0.117	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	K-40	pCi/g	3.71	1.47	1.51	1.96	0.582	U	1.33		30
160-43079-1	SAMP	FSS-001-081121	Soil	Na-22	pCi/g	0.00974	0.0434	0.0434	1.96	0.0343	U	0.0844	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Zn-65	pCi/g	-0.158	0.132	0.133	1.96	0.205	U	0.438	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Ra-226	pCi/g	0.0698	0.246	0.246	1.96	0.199	U	0.416	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Ac-228	pCi/g	0.11	0.292	0.293	1.96	0.165	U	0.37	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Eu-155	pCi/g	0.099	0.348	0.348	1.96	0.290	U	0.592	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Am-241	pCi/g	0.072	0.127	0.127	1.96	0.103	U	0.216	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Eu-152	pCi/g	0.164	0.0656	0.0677	1.96	0.0685	U	0.145		30
160-43079-1	SAMP	FSS-001-081121	Soil	Bi-214	pCi/g	0.0698	0.246	0.246	1.96	0.199	U	0.416	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Bi-212	pCi/g	-0.752	1.01	1.01	1.96	0.792	U	1.71	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Pb-214	pCi/g	0.0232	0.0572	0.0573	1.96	0.175	U	0.364	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Pb-212	pCi/g	0.282	0.106	0.111	1.96	0.0485	U	0.105		30
160-43079-1	SAMP	FSS-001-081121	Soil	Ra-228	pCi/g	0.11	0.292	0.293	1.96	0.165		0.37	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Eu-154	pCi/g	0.0469	0.098	0.0981	1.96	0.0462	U	0.0982	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Cs-137	pCi/g	0.000928	0.0576	0.0576	1.96	0.0482		0.107	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Co-60	pCi/g	0.0123	0.0394	0.0395	1.96	0.0294	U	0.0737	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	K-40	pCi/g	5.26	1.14	1.25	1.96	0.350	U	0.849		30
160-43079-10	SAMP	FSS-010-081121	Soil	Na-22	pCi/g	0.00	0.0104	0.0104	1.96	0.0123	U	0.039	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Zn-65	pCi/g	-0.00525	0.138	0.138	1.96	0.151		0.328	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Ra-226	pCi/g	0.581	0.145	0.157	1.96	0.0496	U	0.117		30
160-43079-10	SAMP	FSS-010-081121	Soil	Ac-228	pCi/g	0.886	0.175	0.196	1.96	0.0599	U	0.158		30
160-43079-10	SAMP	FSS-010-081121	Soil	Eu-155	pCi/g	0.0919	0.269	0.269	1.96	0.223	U	0.46	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Am-241	pCi/g	0.077	0.202	0.202	1.96	0.167		0.346	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Eu-152	pCi/g	0.231	0.115	0.118	1.96	0.0839	U	0.178		30
160-43079-10	SAMP	FSS-010-081121	Soil	Bi-214	pCi/g	0.581	0.145	0.157	1.96	0.0496	U	0.117		30
160-43079-10	SAMP	FSS-010-081121	Soil	Bi-212	pCi/g	0.461	0.851	0.852	1.96	0.674	U	1.47	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Pb-214	pCi/g	0.749	0.152	0.17	1.96	0.0591	U	0.133		30
160-43079-10	SAMP	FSS-010-081121	Soil	Pb-212	pCi/g	0.738	0.132	0.162	1.96	0.0718	U	0.153		30

160-43079-10	SAMP	FSS-010-081121	Soil	Eu-154	pCi/g	0.0479	0.06	0.0602	1.96	0.0786	U	0.164	U	30
160-43079-10	SAMP	FSS-010-081121	Soil	Th-232	pCi/g	0.886	0.175	0.196	1.96	0.0599		0.158		30
160-43079-11	SAMP	FSS-011-081121	Soil	Cs-137	pCi/g	-0.0134	0.0794	0.0794	1.96	0.0660	U	0.139	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Co-60	pCi/g	0.0277	0.0458	0.0459	1.96	0.0314	U	0.0736	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	K-40	pCi/g	4.56	0.905	1.01	1.96	0.270	U	0.649		30
160-43079-11	SAMP	FSS-011-081121	Soil	Na-22	pCi/g	-0.0386	0.0514	0.0515	1.96	0.0382		0.0869	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Zn-65	pCi/g	0.00	0.0329	0.0329	1.96	0.119	U	0.256	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Ra-226	pCi/g	0.843	0.141	0.165	1.96	0.0456		0.104		30
160-43079-11	SAMP	FSS-011-081121	Soil	Ac-228	pCi/g	1.43	0.207	0.252	1.96	0.0412	U	0.11		30
160-43079-11	SAMP	FSS-011-081121	Soil	Eu-155	pCi/g	-0.00093	0.0851	0.0851	1.96	0.293	U	0.597	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Am-241	pCi/g	-0.0939	0.0722	0.0728	1.96	0.118		0.244	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Eu-152	pCi/g	0.137	0.271	0.271	1.96	0.204	U	0.423	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Bi-214	pCi/g	0.843	0.141	0.165	1.96	0.0456	U	0.104		30
160-43079-11	SAMP	FSS-011-081121	Soil	Bi-212	pCi/g	0.391	0.793	0.794	1.96	0.640		1.37	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Pb-214	pCi/g	0.836	0.12	0.147	1.96	0.0575		0.126		30
160-43079-11	SAMP	FSS-011-081121	Soil	Pb-212	pCi/g	1.3	0.126	0.207	1.96	0.0450	U	0.097		30
160-43079-11	SAMP	FSS-011-081121	Soil	Eu-154	pCi/g	0.0751	0.121	0.121	1.96	0.0627	U	0.131	U	30
160-43079-11	SAMP	FSS-011-081121	Soil	Th-232	pCi/g	1.43	0.207	0.252	1.96	0.0412		0.11		30
160-43079-12	SAMP	FSS-012-081121	Soil	Cs-137	pCi/g	0.0315	0.0648	0.0649	1.96	0.0525		0.112	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Co-60	pCi/g	-0.0003	0.000472	0.000473	1.96	0.0345	U	0.0787	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	K-40	pCi/g	6.05	0.918	1.1	1.96	0.0844		0.267		30
160-43079-12	SAMP	FSS-012-081121	Soil	Na-22	pCi/g	-0.0116	0.048	0.0481	1.96	0.0390		0.0874	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Zn-65	pCi/g	0.00	0.0296	0.0296	1.96	0.125	U	0.267	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Ra-226	pCi/g	0.744	0.13	0.15	1.96	0.0393		0.0902		30
160-43079-12	SAMP	FSS-012-081121	Soil	Ac-228	pCi/g	1.14	0.168	0.203	1.96	0.117	U	0.259		30
160-43079-12	SAMP	FSS-012-081121	Soil	Eu-155	pCi/g	0.00	0.111	0.111	1.96	0.263	U	0.536	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Am-241	pCi/g	-0.0891	0.185	0.185	1.96	0.153		0.314	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Eu-152	pCi/g	0.0604	0.107	0.107	1.96	0.0784	U	0.164	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Bi-214	pCi/g	0.744	0.13	0.15	1.96	0.0393	U	0.0902		30
160-43079-12	SAMP	FSS-012-081121	Soil	Bi-212	pCi/g	1.26	0.601	0.615	1.96	0.244		0.569		30
160-43079-12	SAMP	FSS-012-081121	Soil	Pb-214	pCi/g	0.673	0.0989	0.12	1.96	0.0454		0.1		30
160-43079-12	SAMP	FSS-012-081121	Soil	Pb-212	pCi/g	1.09	0.109	0.176	1.96	0.0400	U	0.0863		30
160-43079-12	SAMP	FSS-012-081121	Soil	Eu-154	pCi/g	0.0153	0.0263	0.0264	1.96	0.0591	U	0.123	U	30
160-43079-12	SAMP	FSS-012-081121	Soil	Th-232	pCi/g	1.14	0.168	0.203	1.96	0.117	U	0.259		30
160-43079-13	SAMP	FSS-013-081221	Soil	Cs-137	pCi/g	0.15	0.0448	0.0473	1.96	0.011		0.0304		30
160-43079-13	SAMP	FSS-013-081221	Soil	Co-60	pCi/g	0.00377	0.0105	0.0105	1.96	0.0331	U	0.0777	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	K-40	pCi/g	5.02	0.907	1.04	1.96	0.0992		0.314		30
160-43079-13	SAMP	FSS-013-081221	Soil	Na-22	pCi/g	0.00543	0.0284	0.0284	1.96	0.0226		0.0562	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Zn-65	pCi/g	-0.109	0.165	0.165	1.96	0.130		0.28	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Ra-226	pCi/g	0.355	0.0968	0.103	1.96	0.0385		0.0905		30
160-43079-13	SAMP	FSS-013-081221	Soil	Ac-228	pCi/g	0.138	0.12	0.12	1.96	0.0562	U	0.142	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Eu-155	pCi/g	-0.00049	0.00122	0.00122	1.96	0.173	U	0.357	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Am-241	pCi/g	-0.0499	0.125	0.125	1.96	0.103		0.215	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Eu-152	pCi/g	0.00949	0.0265	0.0266	1.96	0.0681	U	0.144	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Bi-214	pCi/g	0.355	0.0968	0.103	1.96	0.0385	U	0.0905		30
160-43079-13	SAMP	FSS-013-081221	Soil	Bi-212	pCi/g	-0.482	0.784	0.786	1.96	0.624		1.34	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Pb-214	pCi/g	0.372	0.0832	0.0914	1.96	0.0510		0.113		30
160-43079-13	SAMP	FSS-013-081221	Soil	Pb-212	pCi/g	0.144	0.0444	0.048	1.96	0.0183	U	0.0439		30
160-43079-13	SAMP	FSS-013-081221	Soil	Ra-228	pCi/g	0.138	0.12	0.12	1.96	0.0562	U	0.142	U	30
160-43079-13	SAMP	FSS-013-081221	Soil	Eu-154	pCi/g	0.0664	0.0465	0.047	1.96	0.0469	U	0.0994	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Cs-137	pCi/g	0.04284	0.07	0.0701	1.96	0.0558		0.12	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Co-60	pCi/g	0.001473	0.0486	0.0486	1.96	0.0245		0.061	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	K-40	pCi/g	6.191	1.09	1.26	1.96	0.298		0.716		30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Na-22	pCi/g	-0.00995	0.0418	0.0418	1.96	0.0335		0.0785	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Zn-65	pCi/g	0.06124	0.0798	0.0801	1.96	0.0569	U	0.134	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Ra-226	pCi/g	0.2986	0.1	0.105	1.96	0.0455		0.105		30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Ac-228	pCi/g	0.09706	0.167	0.167	1.96	0.0831		0.197	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Eu-155	pCi/g	-0.00102	0.0863	0.0863	1.96	0.227	U	0.465	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Am-241	pCi/g	-0.05198	0.0731	0.0733	1.96	0.0969		0.203	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Eu-152	pCi/g	0.07014	0.0608	0.0612	1.96	0.0638	U	0.136	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Bi-214	pCi/g	0.2986	0.1	0.105	1.96	0.0455	U	0.105		30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Bi-212	pCi/g	-0.4972	0.809	0.811	1.96	0.643		1.39	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Pb-214	pCi/g	0.3707	0.0888	0.0965	1.96	0.0407		0.093		30

160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Pb-212	pCi/g	0.00	0.0627	0.0627	1.96	0.0849	U	0.178	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Ra-228	pCi/g	0.09706	0.167	0.167	1.96	0.0831	U	0.197	U	30
160-43079-13 DU	QC_DUP	160-43079-13 DU	Soil	Eu-154	pCi/g	0.04342	0.057	0.0572	1.96	0.0415	U	0.0889	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Cs-137	pCi/g	-0.00029	0.0624	0.0624	1.96	0.0190		0.047	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Co-60	pCi/g	0.0253	0.015	0.0152	1.96	0.0112	U	0.0354	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	K-40	pCi/g	3.50	0.889	0.956	1.96	0.307		0.745		30
160-43079-14	SAMP	FSS-014-081221	Soil	Na-22	pCi/g	-0.0658	0.0747	0.075	1.96	0.0558		0.124	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Zn-65	pCi/g	-0.0046	0.121	0.121	1.96	0.115		0.252	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Ra-226	pCi/g	0.34	0.121	0.126	1.96	0.0468		0.109		30
160-43079-14	SAMP	FSS-014-081221	Soil	Ac-228	pCi/g	0.14	0.233	0.233	1.96	0.176	U	0.385	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Eu-155	pCi/g	-0.0249	0.167	0.167	1.96	0.203	U	0.418	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Am-241	pCi/g	-0.0588	0.18	0.18	1.96	0.149		0.308	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Eu-152	pCi/g	0.143	0.195	0.196	1.96	0.150	U	0.318	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Bi-214	pCi/g	0.34	0.121	0.126	1.96	0.0468		0.109		30
160-43079-14	SAMP	FSS-014-081221	Soil	Bi-212	pCi/g	-0.535	0.839	0.84	1.96	0.662		1.43	U	30
160-43079-14	SAMP	FSS-014-081221	Soil	Pb-214	pCi/g	0.334	0.0959	0.102	1.96	0.0319		0.0767		30
160-43079-14	SAMP	FSS-014-081221	Soil	Pb-212	pCi/g	0.277	0.087	0.0938	1.96	0.0543	U	0.117		30
160-43079-14	SAMP	FSS-014-081221	Soil	Eu-154	pCi/g	0.119	0.0624	0.0636	1.96	0.0534	U	0.113		30
160-43079-14	SAMP	FSS-014-081221	Soil	Th-232	pCi/g	0.14	0.233	0.233	1.96	0.176		0.385	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Cs-137	pCi/g	-0.00473	0.0415	0.0415	1.96	0.0344		0.0756	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Co-60	pCi/g	0.0257	0.019	0.0192	1.96	0.0086	U	0.027	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	K-40	pCi/g	3.37	0.692	0.77	1.96	0.0863		0.273		30
160-43079-15	SAMP	FSS-015-081221	Soil	Na-22	pCi/g	0.00	0.0139	0.0139	1.96	0.0117	U	0.033	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Zn-65	pCi/g	-0.00097	0.096	0.096	1.96	0.0806		0.178	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Ra-226	pCi/g	0.281	0.091	0.0954	1.96	0.0395		0.0909		30
160-43079-15	SAMP	FSS-015-081221	Soil	Ac-228	pCi/g	0.462	0.114	0.123	1.96	0.0219	U	0.0691		30
160-43079-15	SAMP	FSS-015-081221	Soil	Eu-155	pCi/g	0.0424	0.108	0.108	1.96	0.159		0.327	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Am-241	pCi/g	-0.0265	0.114	0.114	1.96	0.0947		0.197	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Eu-152	pCi/g	0.0414	0.0552	0.0553	1.96	0.0432	U	0.0932	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Bi-214	pCi/g	0.281	0.091	0.0954	1.96	0.0395	U	0.0909		30
160-43079-15	SAMP	FSS-015-081221	Soil	Bi-212	pCi/g	0.242	0.4	0.401	1.96	0.305		0.692	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Pb-214	pCi/g	0.253	0.069	0.0737	1.96	0.0273	U	0.0642		30
160-43079-15	SAMP	FSS-015-081221	Soil	Pb-212	pCi/g	0.359	0.0618	0.0768	1.96	0.0198	U	0.046		30
160-43079-15	SAMP	FSS-015-081221	Soil	Eu-154	pCi/g	0.0764	0.0529	0.0535	1.96	0.0373	U	0.0795	U	30
160-43079-15	SAMP	FSS-015-081221	Soil	Th-232	pCi/g	0.462	0.114	0.123	1.96	0.0219	U	0.0691		30
160-43079-16	SAMP	FSS-016-081221	Soil	Cs-137	pCi/g	-0.0183	0.0591	0.0591	1.96	0.0484		0.104	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Co-60	pCi/g	0.00	0.0181	0.0181	1.96	0.0088	U	0.0278	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	K-40	pCi/g	4.29	0.851	0.954	1.96	0.254		0.611		30
160-43079-16	SAMP	FSS-016-081221	Soil	Na-22	pCi/g	-0.0461	0.0543	0.0545	1.96	0.0403		0.0905	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Zn-65	pCi/g	-0.0171	0.138	0.138	1.96	0.115		0.247	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Ra-226	pCi/g	0.245	0.0903	0.0936	1.96	0.0429	U	0.098		30
160-43079-16	SAMP	FSS-016-081221	Soil	Ac-228	pCi/g	0.425	0.124	0.132	1.96	0.0501	U	0.126		30
160-43079-16	SAMP	FSS-016-081221	Soil	Eu-155	pCi/g	0.0257	0.139	0.139	1.96	0.115		0.24	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Am-241	pCi/g	0.026	0.122	0.122	1.96	0.102		0.212	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Eu-152	pCi/g	-0.0522	0.0928	0.093	1.96	0.0756	U	0.158	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Bi-214	pCi/g	0.245	0.0903	0.0936	1.96	0.0429	U	0.098		30
160-43079-16	SAMP	FSS-016-081221	Soil	Bi-212	pCi/g	-0.0207	0.366	0.366	1.96	0.304		0.693	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Pb-214	pCi/g	0.269	0.0729	0.0779	1.96	0.0280		0.0661		30
160-43079-16	SAMP	FSS-016-081221	Soil	Pb-212	pCi/g	0.36	0.07	0.0836	1.96	0.0328	U	0.0722		30
160-43079-16	SAMP	FSS-016-081221	Soil	Eu-154	pCi/g	0.0507	0.0888	0.089	1.96	0.0478	U	0.101	U	30
160-43079-16	SAMP	FSS-016-081221	Soil	Th-232	pCi/g	0.425	0.124	0.132	1.96	0.0501	U	0.126		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Cs-137	pCi/g	0.0154	0.0346	0.0347	1.96	0.0266		0.0619	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Co-60	pCi/g	0.00	0.00914	0.00914	1.96	0.0109	U	0.0344	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	K-40	pCi/g	3.97	0.922	1	1.96	0.299		0.725		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Na-22	pCi/g	-0.0572	0.0657	0.066	1.96	0.0485		0.109	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Zn-65	pCi/g	-0.00448	0.106	0.106	1.96	0.122		0.266	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Ra-226	pCi/g	0.262	0.117	0.12	1.96	0.0571		0.129		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Ac-228	pCi/g	0.4043	0.113	0.12	1.96	0.0280	U	0.0885		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Eu-155	pCi/g	-0.07745	0.153	0.153	1.96	0.173	U	0.358	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Am-241	pCi/g	0.06047	0.151	0.151	1.96	0.124		0.259	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Eu-152	pCi/g	0.08224	0.172	0.172	1.96	0.0715	U	0.152	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Bi-214	pCi/g	0.262	0.117	0.12	1.96	0.0571	U	0.129		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Bi-212	pCi/g	0.3617	0.783	0.784	1.96	0.628		1.36	U	30

160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Pb-214	pCi/g	0.2377	0.111	0.114	1.96	0.0757		0.164		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Pb-212	pCi/g	0.3242	0.0915	0.1	1.96	0.0433	U	0.0949		30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Eu-154	pCi/g	0.06075	0.091	0.0912	1.96	0.0480	U	0.102	U	30
160-43079-16 DU	QC_DUP	160-43079-16 DU	Soil	Th-232	pCi/g	0.4043	0.113	0.12	1.96	0.0280	U	0.0885		30
160-43079-2	SAMP	FSS-002-081121	Soil	Cs-137	pCi/g	-0.0163	0.055	0.055	1.96	0.0546		0.118	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Co-60	pCi/g	0.0337	0.025	0.0252	1.96	0.0112	U	0.0355	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	K-40	pCi/g	4.30	1.05	1.14	1.96	0.379		0.89		30
160-43079-2	SAMP	FSS-002-081121	Soil	Na-22	pCi/g	0.0217	0.0357	0.0358	1.96	0.0250		0.0627	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Zn-65	pCi/g	-0.0173	0.116	0.116	1.96	0.106		0.234	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Ra-226	pCi/g	0.336	0.0953	0.101	1.96	0.0325		0.0807		30
160-43079-2	SAMP	FSS-002-081121	Soil	Ac-228	pCi/g	0.285	0.137	0.14	1.96	0.108	U	0.25		30
160-43079-2	SAMP	FSS-002-081121	Soil	Eu-155	pCi/g	-0.0939	0.22	0.22	1.96	0.223	U	0.459	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Am-241	pCi/g	0.0589	0.147	0.147	1.96	0.121		0.253	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Eu-152	pCi/g	0.0466	0.0698	0.07	1.96	0.0738	U	0.157	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Bi-214	pCi/g	0.336	0.0953	0.101	1.96	0.0325	U	0.0807		30
160-43079-2	SAMP	FSS-002-081121	Soil	Bi-212	pCi/g	0.351	0.605	0.606	1.96	0.470		1.05	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Pb-214	pCi/g	0.364	0.109	0.115	1.96	0.0471		0.107		30
160-43079-2	SAMP	FSS-002-081121	Soil	Pb-212	pCi/g	0.272	0.0794	0.0866	1.96	0.0457	U	0.0999		30
160-43079-2	SAMP	FSS-002-081121	Soil	Eu-154	pCi/g	0.0117	0.0749	0.0749	1.96	0.0623	U	0.131	U	30
160-43079-2	SAMP	FSS-002-081121	Soil	Th-232	pCi/g	0.285	0.137	0.14	1.96	0.108		0.25		30
160-43079-3	SAMP	FSS-003-081121	Soil	Cs-137	pCi/g	-0.019	0.0564	0.0564	1.96	0.0460		0.0989	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Co-60	pCi/g	-0.0297	0.0734	0.0735	1.96	0.0357	U	0.0815	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	K-40	pCi/g	4.42	0.856	0.964	1.96	0.251		0.603		30
160-43079-3	SAMP	FSS-003-081121	Soil	Na-22	pCi/g	0.00838	0.026	0.026	1.96	0.0199		0.0495	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Zn-65	pCi/g	0.00	0.0177	0.0177	1.96	0.0840		0.185	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Ra-226	pCi/g	0.359	0.102	0.108	1.96	0.0398		0.0916		30
160-43079-3	SAMP	FSS-003-081121	Soil	Ac-228	pCi/g	0.132	0.152	0.152	1.96	0.0989	U	0.224	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Eu-155	pCi/g	-0.00779	0.132	0.132	1.96	0.178		0.364	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Am-241	pCi/g	0.0511	0.113	0.113	1.96	0.0925		0.193	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Eu-152	pCi/g	0.0499	0.114	0.114	1.96	0.0664	U	0.14	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Bi-214	pCi/g	0.359	0.102	0.108	1.96	0.0398	U	0.0916		30
160-43079-3	SAMP	FSS-003-081121	Soil	Bi-212	pCi/g	0.452	0.799	0.8	1.96	0.643		1.37	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Pb-214	pCi/g	0.358	0.0891	0.0963	1.96	0.0445		0.0989		30
160-43079-3	SAMP	FSS-003-081121	Soil	Pb-212	pCi/g	0.0396	0.0941	0.0942	1.96	0.0774	U	0.161	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Eu-154	pCi/g	0.0455	0.0706	0.0708	1.96	0.0465	U	0.0978	U	30
160-43079-3	SAMP	FSS-003-081121	Soil	Th-232	pCi/g	0.132	0.152	0.152	1.96	0.0989	U	0.224	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Cs-137	pCi/g	0.0214	0.0442	0.0442	1.96	0.0345		0.0775	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Co-60	pCi/g	0.00544	0.0255	0.0255	1.96	0.0245	U	0.0614	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	K-40	pCi/g	3.51	0.864	0.933	1.96	0.292		0.708		30
160-43079-4	SAMP	FSS-004-081121	Soil	Na-22	pCi/g	0.0103	0.042	0.042	1.96	0.0335		0.079	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Zn-65	pCi/g	-0.00037	0.121	0.121	1.96	0.102	U	0.225	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Ra-226	pCi/g	0.382	0.108	0.115	1.96	0.0426		0.1		30
160-43079-4	SAMP	FSS-004-081121	Soil	Ac-228	pCi/g	0.54	0.156	0.165	1.96	0.0274	U	0.0865		30
160-43079-4	SAMP	FSS-004-081121	Soil	Eu-155	pCi/g	0.00198	0.00374	0.00375	1.96	0.180	U	0.372	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Am-241	pCi/g	0.0632	0.157	0.158	1.96	0.130		0.27	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Eu-152	pCi/g	0.0784	0.19	0.19	1.96	0.0887	U	0.186	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Bi-214	pCi/g	0.382	0.108	0.115	1.96	0.0426	U	0.1		30
160-43079-4	SAMP	FSS-004-081121	Soil	Bi-212	pCi/g	0.333	0.703	0.704	1.96	0.561		1.22	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Pb-214	pCi/g	0.232	0.117	0.119	1.96	0.0824		0.177		30
160-43079-4	SAMP	FSS-004-081121	Soil	Pb-212	pCi/g	0.306	0.104	0.111	1.96	0.0537	U	0.116		30
160-43079-4	SAMP	FSS-004-081121	Soil	Eu-154	pCi/g	0.0263	0.0677	0.0677	1.96	0.0555	U	0.117	U	30
160-43079-4	SAMP	FSS-004-081121	Soil	Th-232	pCi/g	0.54	0.156	0.165	1.96	0.0274	U	0.0865		30
160-43079-5	SAMP	FSS-005-081121	Soil	Cs-137	pCi/g	-0.0204	0.0626	0.0627	1.96	0.0640		0.138	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Co-60	pCi/g	-0.0507	0.106	0.106	1.96	0.0525	U	0.12	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	K-40	pCi/g	3.89	1.02	1.09	1.96	0.361		0.875		30
160-43079-5	SAMP	FSS-005-081121	Soil	Na-22	pCi/g	-0.00182	0.0354	0.0354	1.96	0.0293	U	0.0734	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Zn-65	pCi/g	0.137	0.104	0.105	1.96	0.0635	U	0.153	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Ra-226	pCi/g	0.287	0.116	0.12	1.96	0.0477		0.114		30
160-43079-5	SAMP	FSS-005-081121	Soil	Ac-228	pCi/g	0.192	0.14	0.142	1.96	0.0730	U	0.185		30
160-43079-5	SAMP	FSS-005-081121	Soil	Eu-155	pCi/g	0.0663	0.102	0.103	1.96	0.108	U	0.23	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Am-241	pCi/g	0.0676	0.169	0.169	1.96	0.139		0.29	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Eu-152	pCi/g	0.112	0.081	0.0818	1.96	0.155	U	0.331	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Bi-214	pCi/g	0.287	0.116	0.12	1.96	0.0477	U	0.114		30

160-43079-5	SAMP	FSS-005-081121	Soil	Bi-212	pCi/g	-0.582	0.96	0.962	1.96	0.759		1.65	U	30
160-43079-5	SAMP	FSS-005-081121	Soil	Pb-214	pCi/g	0.279	0.0886	0.0931	1.96	0.0444		0.104		30
160-43079-5	SAMP	FSS-005-081121	Soil	Pb-212	pCi/g	0.217	0.0768	0.0816	1.96	0.0441	U	0.0982		30
160-43079-5	SAMP	FSS-005-081121	Soil	Ra-228	pCi/g	0.192	0.14	0.142	1.96	0.0730	U	0.185		30
160-43079-5	SAMP	FSS-005-081121	Soil	Eu-154	pCi/g	0.0867	0.122	0.122	1.96	0.0524	U	0.112	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Cs-137	pCi/g	0.0179	0.0346	0.0346	1.96	0.0268		0.0607	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Co-60	pCi/g	0.0338	0.0177	0.018	1.96	0.0302	U	0.0709	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	K-40	pCi/g	5.24	0.942	1.08	1.96	0.260		0.625		30
160-43079-7	SAMP	FSS-007-081121	Soil	Na-22	pCi/g	-0.0335	0.0478	0.0479	1.96	0.0357		0.0816	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Zn-65	pCi/g	0.0547	0.117	0.117	1.96	0.0933	U	0.205	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Ra-226	pCi/g	0.311	0.1	0.105	1.96	0.0448		0.102		30
160-43079-7	SAMP	FSS-007-081121	Soil	Ac-228	pCi/g	0.384	0.12	0.126	1.96	0.0229	U	0.0725		30
160-43079-7	SAMP	FSS-007-081121	Soil	Eu-155	pCi/g	0.0649	0.223	0.223	1.96	0.186	U	0.381	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Am-241	pCi/g	-0.0402	0.0751	0.0752	1.96	0.0803		0.169	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Eu-152	pCi/g	0.102	0.212	0.212	1.96	0.152	U	0.318	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Bi-214	pCi/g	0.311	0.1	0.105	1.96	0.0448		0.102		30
160-43079-7	SAMP	FSS-007-081121	Soil	Bi-212	pCi/g	0.00	0.404	0.404	1.96	0.539		1.17	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Pb-214	pCi/g	0.341	0.0793	0.0865	1.96	0.0334		0.0771		30
160-43079-7	SAMP	FSS-007-081121	Soil	Pb-212	pCi/g	0.342	0.0707	0.0829	1.96	0.0348	U	0.0765		30
160-43079-7	SAMP	FSS-007-081121	Soil	Eu-154	pCi/g	0.0362	0.036	0.0362	1.96	0.0568	U	0.119	U	30
160-43079-7	SAMP	FSS-007-081121	Soil	Th-232	pCi/g	0.384	0.12	0.126	1.96	0.0229	U	0.0725		30
160-43079-8	SAMP	FSS-008-081121	Soil	Cs-137	pCi/g	-0.0176	0.0508	0.0508	1.96	0.0413		0.089	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Co-60	pCi/g	-0.0148	0.0545	0.0545	1.96	0.0267	U	0.0627	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	K-40	pCi/g	4.98	0.811	0.953	1.96	0.0801		0.253		30
160-43079-8	SAMP	FSS-008-081121	Soil	Na-22	pCi/g	0.00548	0.0318	0.0318	1.96	0.0258		0.0605	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Zn-65	pCi/g	0.00	0.0324	0.0324	1.96	0.101		0.218	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Ra-226	pCi/g	0.238	0.0785	0.0821	1.96	0.0353		0.0815		30
160-43079-8	SAMP	FSS-008-081121	Soil	Ac-228	pCi/g	0.305	0.101	0.105	1.96	0.0203	U	0.0642		30
160-43079-8	SAMP	FSS-008-081121	Soil	Eu-155	pCi/g	-0.0315	0.202	0.202	1.96	0.1691		0.347	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Am-241	pCi/g	-0.0549	0.124	0.124	1.96	0.102		0.211	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Eu-152	pCi/g	0.0687	0.11	0.11	1.96	0.147	U	0.306	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Bi-214	pCi/g	0.238	0.0785	0.0821	1.96	0.0353	U	0.0815		30
160-43079-8	SAMP	FSS-008-081121	Soil	Bi-212	pCi/g	-0.0234	0.511	0.511	1.96	0.427		0.931	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Pb-214	pCi/g	0.284	0.0963	0.101	1.96	0.0419		0.0928		30
160-43079-8	SAMP	FSS-008-081121	Soil	Pb-212	pCi/g	0.358	0.0646	0.079	1.96	0.0285	U	0.063		30
160-43079-8	SAMP	FSS-008-081121	Soil	Eu-154	pCi/g	0.0292	0.0587	0.0588	1.96	0.0423	U	0.0892	U	30
160-43079-8	SAMP	FSS-008-081121	Soil	Th-232	pCi/g	0.305	0.101	0.105	1.96	0.0203	U	0.0642		30
160-43079-9	SAMP	FSS-009-081121	Soil	Cs-137	pCi/g	0.00344	0.0602	0.0602	1.96	0.0336		0.0751	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	Co-60	pCi/g	0.00	0.0085	0.0085	1.96	0.0101	U	0.0319	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	K-40	pCi/g	3.62	0.998	1.06	1.96	0.384		0.887		30
160-43079-9	SAMP	FSS-009-081121	Soil	Na-22	pCi/g	0.0335	0.0232	0.0234	1.96	0.0097		0.0308		30
160-43079-9	SAMP	FSS-009-081121	Soil	Zn-65	pCi/g	0.00506	0.116	0.116	1.96	0.0969	U	0.214	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	Ra-226	pCi/g	0.373	0.112	0.118	1.96	0.0467		0.107		30
160-43079-9	SAMP	FSS-009-081121	Soil	Ac-228	pCi/g	0.332	0.152	0.155	1.96	0.0815	U	0.193		30
160-43079-9	SAMP	FSS-009-081121	Soil	Eu-155	pCi/g	0.0715	0.254	0.254	1.96	0.212	U	0.434	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	Am-241	pCi/g	0.0489	0.104	0.104	1.96	0.0639		0.137	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	Eu-152	pCi/g	0.159	0.0971	0.0984	1.96	0.0536	U	0.115		30
160-43079-9	SAMP	FSS-009-081121	Soil	Bi-214	pCi/g	0.373	0.112	0.118	1.96	0.0467	U	0.107		30
160-43079-9	SAMP	FSS-009-081121	Soil	Bi-212	pCi/g	-0.527	0.8	0.802	1.96	0.634		1.36	U	30
160-43079-9	SAMP	FSS-009-081121	Soil	Pb-214	pCi/g	0.414	0.0876	0.0973	1.96	0.0367		0.0849		30
160-43079-9	SAMP	FSS-009-081121	Soil	Pb-212	pCi/g	0.265	0.0658	0.0739	1.96	0.0321	U	0.0719		30
160-43079-9	SAMP	FSS-009-081121	Soil	Ra-228	pCi/g	0.332	0.152	0.155	1.96	0.0815	U	0.193		30
160-43079-9	SAMP	FSS-009-081121	Soil	Eu-154	pCi/g	0.0197	0.0286	0.0287	1.96	0.0520	U	0.11	U	30
LCS 160-523157/2-A	QC_LCS	LCS 160-523157/2-A	Soil	Cs-137	pCi/g	25.19	0.53	2.62	1.96	0.0654		0.138		30
LCS 160-523157/2-A	QC_LCS	LCS 160-523157/2-A	Soil	Co-60	pCi/g	8.145	0.264	0.844	1.96	0.0475	U	0.106		30
LCS 160-523157/2-A	QC_LCS	LCS 160-523157/2-A	Soil	Am-241	pCi/g	96.18	1.47	9.89	1.96	0.528		1.06		30
LCS 160-523357/2-A	QC_LCS	LCS 160-523357/2-A	Soil	Cs-137	pCi/g	25.39	0.539	2.65	1.96	0.0763		0.16		30
LCS 160-523357/2-A	QC_LCS	LCS 160-523357/2-A	Soil	Co-60	pCi/g	8.135	0.265	0.843	1.96	0.0400	U	0.0909		30
LCS 160-523357/2-A	QC_LCS	LCS 160-523357/2-A	Soil	Am-241	pCi/g	97.85	1.41	10.1	1.96	0.497		1		30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Cs-137	pCi/g	0.00	0.0159	0.0159	1.96	0.0239	U	0.0588	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Co-60	pCi/g	0.00	0.0127	0.0127	1.96	0.0151	U	0.0478	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	K-40	pCi/g	0.3615	0.468	0.469	1.96	0.290		0.758	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Na-22	pCi/g	0.00	0.0244	0.0244	1.96	0.0145		0.0459	U	30

MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Zn-65	pCi/g	-0.05409	0.139	0.139	1.96	0.155	U	0.34	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Ra-226	pCi/g	-0.03436	0.0898	0.0898	1.96	0.129		0.277	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Ac-228	pCi/g	0.0261	0.0798	0.0798	1.96	0.0369		0.117	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Eu-155	pCi/g	-0.00467	0.0101	0.0102	1.96	0.133	U	0.279	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Am-241	pCi/g	0.05318	0.0693	0.0695	1.96	0.0532	U	0.117	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Eu-152	pCi/g	0.09179	0.0542	0.0551	1.96	0.0327		0.0741		30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Bi-214	pCi/g	-0.03436	0.0898	0.0898	1.96	0.1288		0.277	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Bi-212	pCi/g	0.00	0.138	0.138	1.96	0.367	U	0.868	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Pb-214	pCi/g	0.01165	0.116	0.116	1.96	0.0960		0.206	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Pb-212	pCi/g	0.005607	0.0663	0.0663	1.96	0.0548		0.119	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Eu-154	pCi/g	0.01123	0.0186	0.0186	1.96	0.0132		0.0326	U	30
MB 160-523157/1-A	QC_BLK	MB 160-523157/1-A	Soil	Th-232	pCi/g	0.0261	0.0798	0.0798	1.96	0.0369	U	0.117	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Cs-137	pCi/g	-0.01892	0.0665	0.0665	1.96	0.0544		0.118	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Co-60	pCi/g	0.000665	0.0065	0.0065	1.96	0.0272		0.0678	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	K-40	pCi/g	-0.2086	0.677	0.677	1.96	0.435		1.01	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Na-22	pCi/g	0.00	0.00929	0.00929	1.96	0.0110		0.0349	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Zn-65	pCi/g	0.00	0.0165	0.0165	1.96	0.0734		0.17	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Ra-226	pCi/g	-0.06055	0.127	0.128	1.96	0.118		0.251	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Ac-228	pCi/g	0.04812	0.166	0.166	1.96	0.0924	U	0.219	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Eu-155	pCi/g	0.0028	0.053	0.053	1.96	0.120	U	0.253	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Am-241	pCi/g	0.02933	0.0712	0.0712	1.96	0.0569		0.124	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Eu-152	pCi/g	0.001162	0.00211	0.00212	1.96	0.0549	U	0.119	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Bi-214	pCi/g	-0.06055	0.127	0.128	1.96	0.118	U	0.251	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Bi-212	pCi/g	0.02701	0.498	0.498	1.96	0.415	U	0.94	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Pb-214	pCi/g	0.003199	0.00897	0.00897	1.96	0.0789	U	0.171	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Pb-212	pCi/g	0.01849	0.0537	0.0538	1.96	0.0434	U	0.0954	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Ra-228	pCi/g	0.04812	0.166	0.166	1.96	0.0924	U	0.219	U	30
MB 160-523357/1-A	QC_BLK	MB 160-523357/1-A	Soil	Eu-154	pCi/g	0.06079	0.0377	0.0382	1.96	0.0343		0.0751	U	30
160-43079-1	SAMP	FSS-001-081121	Soil	Ni-63	pCi/g	0.563	0.885	0.887	1.96	0.722	U	1.51	U	60
160-43079-10	SAMP	FSS-010-081121	Soil	Ni-63	pCi/g	0.163	0.96	0.96	1.96	0.801	U	1.67	U	60
160-43079-11	SAMP	FSS-011-081121	Soil	Ni-63	pCi/g	-0.0332	0.853	0.853	1.96	0.714	U	1.49	U	60
160-43079-12	SAMP	FSS-012-081121	Soil	Ni-63	pCi/g	-0.0926	1.08	1.08	1.96	0.909	U	1.9	U	60
160-43079-13	SAMP	FSS-013-081221	Soil	Ni-63	pCi/g	0.404	0.786	0.787	1.96	0.644	U	1.35	U	60
160-43079-14	SAMP	FSS-014-081221	Soil	Ni-63	pCi/g	0.463	0.865	0.867	1.96	0.712	U	1.49	U	60
160-43079-15	SAMP	FSS-015-081221	Soil	Ni-63	pCi/g	-0.0979	0.945	0.945	1.96	0.806	U	1.68	U	60
160-43079-16	SAMP	FSS-016-081221	Soil	Ni-63	pCi/g	0.0726	1.03	1.03	1.96	0.871	U	1.82	U	60
160-43079-2	SAMP	FSS-002-081121	Soil	Ni-63	pCi/g	0.404	0.868	0.869	1.96	0.713	U	1.49	U	60
160-43079-3	SAMP	FSS-003-081121	Soil	Ni-63	pCi/g	-0.321	0.824	0.825	1.96	0.702	U	1.47	U	60
160-43079-4	SAMP	FSS-004-081121	Soil	Ni-63	pCi/g	-0.00647	0.873	0.873	1.96	0.734	U	1.53	U	60
160-43079-5	SAMP	FSS-005-081121	Soil	Ni-63	pCi/g	-1.44	1.9	1.9	1.96	1.63	U	3.41	U	60
160-43079-7	SAMP	FSS-007-081121	Soil	Ni-63	pCi/g	0.15	0.862	0.862	1.96	0.714	U	1.49	U	60
160-43079-7 DU	QC_DUP	160-43079-7 DU	Soil	Ni-63	pCi/g	-0.2638	0.921	0.922	1.96	0.798	U	1.67	U	60
160-43079-8	SAMP	FSS-008-081121	Soil	Ni-63	pCi/g	0.11	0.876	0.876	1.96	0.732	U	1.53	U	60
160-43079-9	SAMP	FSS-009-081121	Soil	Ni-63	pCi/g	0.0723	0.903	0.903	1.96	0.754	U	1.58	U	60
LCS 160-524237/2-A	QC_LCS	LCS 160-524237/2-A	Soil	Ni-63	pCi/g	19.63	1.65	2.59	1.96	0.801	U	1.67		60
MB 160-524237/1-A	QC_BLK	MB 160-524237/1-A	Soil	Ni-63	pCi/g	-0.5258	1.24	1.24	1.96	1.06	U	2.21	U	60
160-43079-1	SAMP	FSS-001-081121	Soil	Pu-241	pCi/g	-0.284	1.11	1.11	1.96	0.958	U	2.01	U	60
160-43079-10	SAMP	FSS-010-081121	Soil	Pu-241	pCi/g	0.184	1.81	1.81	1.96	1.55	U	3.24	U	60
160-43079-11	SAMP	FSS-011-081121	Soil	Pu-241	pCi/g	-1.86	1.61	1.62	1.96	1.46	U	3.06	U	60
160-43079-12	SAMP	FSS-012-081121	Soil	Pu-241	pCi/g	-1.13	1.5	1.5	1.96	1.30		2.71	U	60
160-43079-13	SAMP	FSS-013-081221	Soil	Pu-241	pCi/g	-0.167	1.32	1.32	1.96	1.13	U	2.37	U	60
160-43079-14	SAMP	FSS-014-081221	Soil	Pu-241	pCi/g	-1.19	1.48	1.49	1.96	1.28	U	2.67	U	60
160-43079-15	SAMP	FSS-015-081221	Soil	Pu-241	pCi/g	-0.971	1.46	1.46	1.96	1.26	U	2.63	U	60
160-43079-16	SAMP	FSS-016-081221	Soil	Pu-241	pCi/g	-1.85	1.52	1.53	1.96	1.34	U	2.81	U	60
160-43079-2	SAMP	FSS-002-081121	Soil	Pu-241	pCi/g	-1.8	2.21	2.21	1.96	1.89	U	3.96	U	60
160-43079-2 DU	QC_DUP	160-43079-2 DU	Soil	Pu-241	pCi/g	-1.278	1.64	1.64	1.96	1.40	U	2.93	U	60
160-43079-3	SAMP	FSS-003-081121	Soil	Pu-241	pCi/g	-2.09	1.48	1.49	1.96	1.30	U	2.73	U	60
160-43079-4	SAMP	FSS-004-081121	Soil	Pu-241	pCi/g	-2.37	1.3	1.32	1.96	1.19	U	2.49	U	60
160-43079-5	SAMP	FSS-005-081121	Soil	Pu-241	pCi/g	0.469	1.01	1.01	1.96	0.835	U	1.75	U	60
160-43079-6	SAMP	FSS-006-081121	Soil	Pu-241	pCi/g	-1.44	1.2	1.21	1.96	1.06	U	2.21	U	60
160-43079-7	SAMP	FSS-007-081121	Soil	Pu-241	pCi/g	-2.69	1.72	1.74	1.96	1.54	U	3.23	U	60
160-43079-8	SAMP	FSS-008-081121	Soil	Pu-241	pCi/g	-1.34	1.99	1.99	1.96	1.70	U	3.56	U	60
160-43079-9	SAMP	FSS-009-081121	Soil	Pu-241	pCi/g	-0.0957	1.11	1.11	1.96	0.936	U	1.96	U	60

160-43124-D-6-I	SAMP	160-43124-D-6-I	Soil	Pu-241	pCi/g	-0.385	1.1	1.1	1.96	0.942	U	1.97	U	60
160-43124-D-6-J DU	QC_DUP	160-43124-D-6-J DU	Soil	Pu-241	pCi/g	-0.1104	1.31	1.31	1.96	1.12	U	2.34	U	60
LCS 160-524625/2-A	QC_LCS	LCS 160-524625/2-A	Soil	Pu-241	pCi/g	21.72	3.13	3.67	1.96	1.84	U	3.85		60
LCS 160-525000/2-A	QC_LCS	LCS 160-525000/2-A	Soil	Pu-241	pCi/g	19.34	1.87	2.53	1.96	0.933		1.96		60
MB 160-524625/1-A	QC_BLK	MB 160-524625/1-A	Soil	Pu-241	pCi/g	-0.9155	1.61	1.61	1.96	1.39	U	2.91	U	60
MB 160-525000/1-A	QC_BLK	MB 160-525000/1-A	Soil	Pu-241	pCi/g	-0.2839	1.08	1.08	1.96	0.925	U	1.94	U	60
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Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43079-6	SAMP	FSS-006-081121	Soil	Sr-90	pCi/g	-0.00484	0.238	0.238	1.96	0.200	U	0.437	U	200
160-43154-D-9-O	SAMP	160-43154-D-9-O	Soil	Sr-90	pCi/g	-0.0873	0.227	0.227	1.96	0.199	U	0.437	U	200
160-43154-D-9-P DU	QC_DUP	160-43154-D-9-P DU	Soil	Sr-90	pCi/g	0.5617	0.332	0.335	1.96	0.228		0.507		200
LCS 160-528721/1-A	QC_LCS	LCS 160-528721/1-A	Soil	Sr-90	pCi/g	1.37	0.109	0.155	1.96	0.0330		0.0718		200
MB 160-528721/11-A	QC_BLK	MB 160-528721/11-A	Soil	Sr-90	pCi/g	-0.005	0.0292	0.0292	1.96	0.0249	U	0.0549	U	200
160-43079-6	SAMP	FSS-006-081121	Soil	C-14	pCi/g	-0.438	0.514	0.516	1.96	0.442	U	0.911	U	60
160-43079-6 MS	QC_MS	160-43079-6 MS	Soil	C-14	pCi/g	80.66	1.77	8.72	1.96	0.437		0.901		60
160-43587-B-1-A	SAMP	160-43587-B-1-A	Soil	C-14	pCi/g	0.0421	0.536	0.536	1.96	0.445	U	0.918	U	60
160-43587-B-1-B DU	QC_DUP	160-43587-B-1-B DU	Soil	C-14	pCi/g	-0.05405	0.574	0.574	1.96	0.481	U	0.992	U	60
LCS 160-531311/2-A	QC_LCS	LCS 160-531311/2-A	Soil	C-14	pCi/g	84.41	1.89	9.13	1.96	0.477		0.985		60
MB 160-531311/1-A	QC_BLK	MB 160-531311/1-A	Soil	C-14	pCi/g	0.4505	0.596	0.598	1.96	0.487	U	1.00	U	60
160-43079-6	SAMP	FSS-006-081121	Soil	Cs-137	pCi/g	-0.0209	0.0609	0.0609	1.96	0.049	U	0.107	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Co-60	pCi/g	0.0276	0.0221	0.0223	1.96	0.0107		0.0339	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	K-40	pCi/g	6.83	1.10	1.30	1.96	0.108		0.342		30
160-43079-6	SAMP	FSS-006-081121	Soil	Na-22	pCi/g	0.0237	0.0356	0.0356	1.96	0.0247	U	0.0613	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Zn-65	pCi/g	0.00	0.0819	0.0819	1.96	0.0830	U	0.187	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Ra-226	pCi/g	0.282	0.0944	0.0987	1.96	0.0320		0.0787		30
160-43079-6	SAMP	FSS-006-081121	Soil	Ac-228	pCi/g	0.247	0.155	0.157	1.96	0.0613		0.154		30
160-43079-6	SAMP	FSS-006-081121	Soil	Eu-155	pCi/g	0.00	0.0873	0.0873	1.96	0.209	U	0.431	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Am-241	pCi/g	-0.0408	0.141	0.142	1.96	0.117	U	0.244	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Eu-152	pCi/g	0.0816	0.114	0.114	1.96	0.0700		0.149	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Bi-214	pCi/g	0.282	0.0944	0.0987	1.96	0.0320		0.0787		30
160-43079-6	SAMP	FSS-006-081121	Soil	Bi-212	pCi/g	-0.48	0.804	0.805	1.96	0.638	U	1.38	U	30
160-43079-6	SAMP	FSS-006-081121	Soil	Pb-214	pCi/g	0.399	0.0766	0.0867	1.96	0.0217		0.0556		30
160-43079-6	SAMP	FSS-006-081121	Soil	Pb-212	pCi/g	0.249	0.0628	0.0702	1.96	0.0279		0.0638		30
160-43079-6	SAMP	FSS-006-081121	Soil	Ra-228	pCi/g	0.247	0.155	0.157	1.96	0.0613		0.154		30
160-43079-6	SAMP	FSS-006-081121	Soil	Eu-154	pCi/g	0.066	0.125	0.125	1.96	0.0496		0.105	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Cs-137	pCi/g	0.02227	0.0487	0.0488	1.96	0.0384	U	0.0857	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Co-60	pCi/g	0.01502	0.0437	0.0437	1.96	0.0267	U	0.0665	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	K-40	pCi/g	6.603	1.17	1.35	1.96	0.306		0.743		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Na-22	pCi/g	0.04187	0.0274	0.0277	1.96	0.0108		0.0343		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Zn-65	pCi/g	-3.9E-09	0.166	0.166	1.96	0.140	U	0.302	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Ra-226	pCi/g	0.2613	0.109	0.113	1.96	0.0518		0.119		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Ac-228	pCi/g	0.3008	0.127	0.131	1.96	0.0358		0.105		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Eu-155	pCi/g	0.00	0.0419	0.0419	1.96	0.212	U	0.436	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Am-241	pCi/g	0.02312	0.137	0.137	1.96	0.114	U	0.238	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Eu-152	pCi/g	0.1104	0.0684	0.0693	1.96	0.0648		0.139	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Bi-214	pCi/g	0.2613	0.109	0.113	1.96	0.0518		0.119		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Bi-212	pCi/g	-0.03977	0.588	0.588	1.96	0.490	U	1.09	U	30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Pb-214	pCi/g	0.3041	0.0926	0.0976	1.96	0.0413		0.0954		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Pb-212	pCi/g	0.2543	0.0737	0.0804	1.96	0.0405		0.0895		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Ra-228	pCi/g	0.3008	0.127	0.131	1.96	0.0358		0.105		30
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Eu-154	pCi/g	0.03071	0.0453	0.0454	1.96	0.0556	U	0.118	U	30
LCS 160-528523/2-A	QC_LCS	LCS 160-528523/2-A	Soil	Cs-137	pCi/g	25.83	0.543	2.69	1.96	0.0610		0.13		30
LCS 160-528523/2-A	QC_LCS	LCS 160-528523/2-A	Soil	Co-60	pCi/g	8.042	0.252	0.831	1.96	0.0235		0.0584		30
LCS 160-528523/2-A	QC_LCS	LCS 160-528523/2-A	Soil	Am-241	pCi/g	96.68	1.42	9.94	1.96	0.502		1.01		30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Cs-137	pCi/g	-0.00455	0.0603	0.0603	1.96	0.0565	U	0.128	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Co-60	pCi/g	0.00	0.0167	0.0167	1.96	0.0198	U	0.0626	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	K-40	pCi/g	-0.3609	1.43	1.43	1.96	0.577	U	1.39	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Na-22	pCi/g	0.00	0.016	0.016	1.96	0.0425	U	0.107	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Zn-65	pCi/g	0.00	0.0281	0.0281	1.96	0.125	U	0.289	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Ra-226	pCi/g	-0.04333	0.100	0.101	1.96	0.160	U	0.345	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Ac-228	pCi/g	-0.08891	0.304	0.304	1.96	0.157	U	0.37	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Eu-155	pCi/g	0.04946	0.172	0.173	1.96	0.142	U	0.3	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Am-241	pCi/g	0.02042	0.124	0.125	1.96	0.103	U	0.22	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Eu-152	pCi/g	0.1655	0.103	0.104	1.96	0.0455		0.103		30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Bi-214	pCi/g	-0.04333	0.100	0.101	1.96	0.160	U	0.345	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Bi-212	pCi/g	-0.4888	0.966	0.967	1.96	0.756	U	1.69	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Pb-214	pCi/g	-0.00677	0.021	0.021	1.96	0.114	U	0.246	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Pb-212	pCi/g	-0.01995	0.0984	0.0984	1.96	0.0837	U	0.179	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Ra-228	pCi/g	-0.08891	0.304	0.304	1.96	0.157	U	0.37	U	30
MB 160-528523/1-A	QC_BLK	MB 160-528523/1-A	Soil	Eu-154	pCi/g	0.01445	0.0407	0.0407	1.96	0.0324	U	0.073	U	30

160-43079-6	SAMP	FSS-006-081121	Soil	Ni-63	pCi/g	0.867	0.96	0.964	1.96	0.793	1.66	U	60
160-43079-6 DU	QC_DUP	160-43079-6 DU	Soil	Ni-63	pCi/g	1.324	1.00	1.01	1.96	0.813	1.70	U	60
LCS 160-530579/2-A	QC_LCS	LCS 160-530579/2-A	Soil	Ni-63	pCi/g	20.67	1.70	2.71	1.96	0.819	1.71		60
MB 160-530579/1-A	QC_BLK	MB 160-530579/1-A	Soil	Ni-63	pCi/g	1.007	0.942	0.947	1.96	0.767	1.60	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43084-1	SAMP	FSS-017-081221	Soil	Sr-90	pCi/g	0.201	0.219	0.219	1.96	0.169		0.366	U	200
160-43084-10	SAMP	FSS-026-081221	Soil	Sr-90	pCi/g	0.179	0.203	0.204	1.96	0.157		0.342	U	200
160-43084-11	SAMP	FSS-027-081221	Soil	Sr-90	pCi/g	-0.0597	0.168	0.168	1.96	0.146	U	0.320	U	200
160-43084-12	SAMP	FSS-028-081221	Soil	Sr-90	pCi/g	0.0813	0.174	0.174	1.96	0.138	U	0.305	U	200
160-43084-13	SAMP	FSS-029-081321	Soil	Sr-90	pCi/g	0.183	0.171	0.172	1.96	0.129		0.282	U	200
160-43084-14	SAMP	FSS-030-081321	Soil	Sr-90	pCi/g	0.0765	0.181	0.181	1.96	0.146	U	0.318	U	200
160-43084-15	SAMP	FSS-031-081321	Soil	Sr-90	pCi/g	0.354	0.203	0.205	1.96	0.143		0.312		200
160-43084-16	SAMP	FSS-032-081321	Soil	Sr-90	pCi/g	0.144	0.178	0.179	1.96	0.138		0.302	U	200
160-43084-17	SAMP	FSS-033-081321	Soil	Sr-90	pCi/g	0.235	0.224	0.225	1.96	0.172		0.371	U	200
160-43084-18	SAMP	FSS-034-081321	Soil	Sr-90	pCi/g	0.126	0.182	0.182	1.96	0.143	U	0.312	U	200
160-43084-19	SAMP	FSS-035-081321	Soil	Sr-90	pCi/g	0.303	0.195	0.196	1.96	0.141		0.307	U	200
160-43084-2	SAMP	FSS-018-081221	Soil	Sr-90	pCi/g	0.0861	0.200	0.200	1.96	0.162	U	0.351	U	200
160-43084-20	SAMP	FSS-036-081321	Soil	Sr-90	pCi/g	-0.0722	0.207	0.207	1.96	0.179	U	0.387	U	200
160-43084-21	SAMP	FSS-037-081321	Soil	Sr-90	pCi/g	0.156	0.194	0.195	1.96	0.152		0.329	U	200
160-43084-22	SAMP	FSS-038-081321	Soil	Sr-90	pCi/g	-0.121	0.187	0.187	1.96	0.165	U	0.355	U	200
160-43084-23	SAMP	FSS-039-081321	Soil	Sr-90	pCi/g	-0.0586	0.173	0.173	1.96	0.149	U	0.324	U	200
160-43084-24	SAMP	FSS-040-081321	Soil	Sr-90	pCi/g	0.0256	0.167	0.167	1.96	0.138	U	0.302	U	200
160-43084-25	SAMP	FSS-041-081321	Soil	Sr-90	pCi/g	0.0959	0.179	0.179	1.96	0.143	U	0.311	U	200
160-43084-26	SAMP	FSS-042-081321	Soil	Sr-90	pCi/g	0.0893	0.198	0.198	1.96	0.159	U	0.345	U	200
160-43084-26 DU	QC_DUP	160-43084-26 DU	Soil	Sr-90	pCi/g	-0.00732	0.203	0.203	1.96	0.171	U	0.37	U	200
160-43084-27	SAMP	FSS-043-081321	Soil	Sr-90	pCi/g	-0.0244	0.195	0.195	1.96	0.165	U	0.359	U	200
160-43084-3	SAMP	FSS-019-081221	Soil	Sr-90	pCi/g	0.0153	0.169	0.169	1.96	0.141	U	0.310	U	200
160-43084-4	SAMP	FSS-020-081221	Soil	Sr-90	pCi/g	0.169	0.182	0.183	1.96	0.139		0.305	U	200
160-43084-5	SAMP	FSS-021-081221	Soil	Sr-90	pCi/g	0.19	0.202	0.203	1.96	0.156		0.338	U	200
160-43084-6	SAMP	FSS-022-081221	Soil	Sr-90	pCi/g	0.179	0.203	0.203	1.96	0.157		0.34	U	200
160-43084-6 DU	QC_DUP	160-43084-6 DU	Soil	Sr-90	pCi/g	0.2872	0.203	0.205	1.96	0.150		0.325	U	200
160-43084-7	SAMP	FSS-023-081221	Soil	Sr-90	pCi/g	0.339	0.192	0.194	1.96	0.136		0.297		200
160-43084-8	SAMP	FSS-024-081221	Soil	Sr-90	pCi/g	0.237	0.165	0.166	1.96	0.118		0.261	U	200
160-43084-9	SAMP	FSS-025-081221	Soil	Sr-90	pCi/g	0.241	0.215	0.216	1.96	0.164		0.354	U	200
LCS 160-524352/1-A	QC_LCS	LCS 160-524352/1-A	Soil	Sr-90	pCi/g	7.574	0.525	0.804	1.96	0.129		0.284		200
LCS 160-525600/2-A	QC_LCS	LCS 160-525600/2-A	Soil	Sr-90	pCi/g	8.082	0.624	0.901	1.96	0.174		0.381		200
LCS 160-525601/2-A	QC_LCS	LCS 160-525601/2-A	Soil	Sr-90	pCi/g	7.387	0.508	0.781	1.96	0.130		0.284		200
MB 160-524352/23-A	QC_BLK	MB 160-524352/23-A	Soil	Sr-90	pCi/g	-0.009816	0.147	0.147	1.96	0.124	U	0.273	U	200
MB 160-525600/1-A	QC_BLK	MB 160-525600/1-A	Soil	Sr-90	pCi/g	0.1515	0.235	0.236	1.96	0.186	U	0.404	U	200
MB 160-525601/1-A	QC_BLK	MB 160-525601/1-A	Soil	Sr-90	pCi/g	0.03829	0.174	0.174	1.96	0.143	U	0.312	U	200
160-43084-1	SAMP	FSS-017-081221	Soil	H-3	pCi/g	0.172	0.212	0.212	1.96	0.163		0.362	U	20
160-43084-10	SAMP	FSS-026-081221	Soil	H-3	pCi/g	0.196	0.21	0.211	1.96	0.158		0.351	U	20
160-43084-11	SAMP	FSS-027-081221	Soil	H-3	pCi/g	0.0817	0.2	0.2	1.96	0.161	U	0.358	U	20
160-43084-12	SAMP	FSS-028-081221	Soil	H-3	pCi/g	0.238	0.216	0.217	1.96	0.159		0.354	U	20
160-43084-13	SAMP	FSS-029-081321	Soil	H-3	pCi/g	0.0489	0.193	0.193	1.96	0.157	U	0.350	U	20
160-43084-14	SAMP	FSS-030-081321	Soil	H-3	pCi/g	0.139	0.207	0.208	1.96	0.162	U	0.360	U	20
160-43084-14 MS	QC_MS	160-43084-14 MS	Soil	H-3	pCi/g	7.523	0.601	0.884	1.96	0.152		0.338		20
160-43084-15	SAMP	FSS-031-081321	Soil	H-3	pCi/g	0.138	0.208	0.208	1.96	0.163	U	0.362	U	20
160-43084-15 DU	QC_DUP	160-43084-15 DU	Soil	H-3	pCi/g	0.2702	0.219	0.22	1.96	0.158		0.352	U	20
160-43084-16	SAMP	FSS-032-081321	Soil	H-3	pCi/g	0.251	0.192	0.193	1.96	0.134		0.299	U	20
160-43084-17	SAMP	FSS-033-081321	Soil	H-3	pCi/g	0.379	0.212	0.215	1.96	0.142		0.317		20
160-43084-18	SAMP	FSS-034-081321	Soil	H-3	pCi/g	0.244	0.197	0.198	1.96	0.140		0.311	U	20
160-43084-19	SAMP	FSS-035-081321	Soil	H-3	pCi/g	0.244	0.205	0.206	1.96	0.148		0.330	U	20
160-43084-2	SAMP	FSS-018-081221	Soil	H-3	pCi/g	0.101	0.199	0.199	1.96	0.157	U	0.349	U	20
160-43084-20	SAMP	FSS-036-081321	Soil	H-3	pCi/g	0.409	0.219	0.222	1.96	0.146		0.325		20
160-43084-21	SAMP	FSS-037-081321	Soil	H-3	pCi/g	0.258	0.201	0.203	1.96	0.143		0.319	U	20
160-43084-22	SAMP	FSS-038-081321	Soil	H-3	pCi/g	0.210	0.204	0.205	1.96	0.151		0.337	U	20
160-43084-23	SAMP	FSS-039-081321	Soil	H-3	pCi/g	0.228	0.213	0.214	1.96	0.156		0.348	U	20
160-43084-24	SAMP	FSS-040-081321	Soil	H-3	pCi/g	0.253	0.206	0.207	1.96	0.149		0.331	U	20
160-43084-25	SAMP	FSS-041-081321	Soil	H-3	pCi/g	0.258	0.203	0.204	1.96	0.145		0.323	U	20
160-43084-26	SAMP	FSS-042-081321	Soil	H-3	pCi/g	0.295	0.209	0.211	1.96	0.147		0.328	U	20
160-43084-26 MS	QC_MS	160-43084-26 MS	Soil	H-3	pCi/g	7.90	0.617	0.919	1.96	0.152		0.337		20
160-43084-27	SAMP	FSS-043-081321	Soil	H-3	pCi/g	0.347	0.22	0.222	1.96	0.153		0.340		20
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	H-3	pCi/g	0.164	0.195	0.196	1.96	0.147		0.328	U	20
160-43084-3	SAMP	FSS-019-081221	Soil	H-3	pCi/g	-0.0107	0.184	0.184	1.96	0.156	U	0.347	U	20
160-43084-4	SAMP	FSS-020-081221	Soil	H-3	pCi/g	0.0759	0.198	0.199	1.96	0.159	U	0.354	U	20
160-43084-5	SAMP	FSS-021-081221	Soil	H-3	pCi/g	0.077	0.209	0.209	1.96	0.169	U	0.377	U	20

160-43084-6	SAMP	FSS-022-081221	Soil	H-3	pCi/g	-0.0592	0.178	0.179	1.96	0.155	U	0.345	U	20
160-43084-7	SAMP	FSS-023-081221	Soil	H-3	pCi/g	0.0248	0.193	0.193	1.96	0.160	U	0.356	U	20
160-43084-8	SAMP	FSS-024-081221	Soil	H-3	pCi/g	0.117	0.204	0.204	1.96	0.161	U	0.358	U	20
160-43084-9	SAMP	FSS-025-081221	Soil	H-3	pCi/g	0.25	0.218	0.219	1.96	0.160		0.355	U	20
LCS 160-524988/2-A	QC_LCS	LCS 160-524988/2-A	Soil	H-3	pCi/g	7.842	0.632	0.926	1.96	0.161		0.359		20
LCS 160-524989/2-A	QC_LCS	LCS 160-524989/2-A	Soil	H-3	pCi/g	7.68	0.583	0.882	1.96	0.140		0.311		20
MB 160-524988/1-A	QC_BLK	MB 160-524988/1-A	Soil	H-3	pCi/g	0.07207	0.201	0.201	1.96	0.163	U	0.363	U	20
MB 160-524989/1-A	QC_BLK	MB 160-524989/1-A	Soil	H-3	pCi/g	0.3345	0.215	0.217	1.96	0.149		0.332		20
160-43084-1	SAMP	FSS-017-081221	Soil	Pu-238	pCi/g	0.0234	0.0658	0.0658	1.96	0.0481	U	0.131	U	240
160-43084-1	SAMP	FSS-017-081221	Soil	Pu-239/Pu-240	pCi/g	0.102	0.078	0.0784	1.96	0.0323		0.0997		240
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	Pu-238	pCi/g	0.003044	0.0373	0.0373	1.96	0.0296	U	0.0958	U	240
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0378	0.0378	1.96	0.0317	U	0.100	U	240
160-43084-10	SAMP	FSS-026-081221	Soil	Pu-238	pCi/g	0.0501	0.0494	0.0495	1.96	0.0145		0.0623	U	240
160-43084-10	SAMP	FSS-026-081221	Soil	Pu-239/Pu-240	pCi/g	0.0195	0.0313	0.0314	1.96	0.0102		0.0539	U	240
160-43084-11	SAMP	FSS-027-081221	Soil	Pu-238	pCi/g	0.0191	0.0308	0.0308	1.96	0.0101		0.0529	U	240
160-43084-11	SAMP	FSS-027-081221	Soil	Pu-239/Pu-240	pCi/g	0.00821	0.0221	0.0221	1.96	0.0101	U	0.053	U	240
160-43084-12	SAMP	FSS-028-081221	Soil	Pu-238	pCi/g	0.062	0.052	0.0523	1.96	0.0099		0.0522		240
160-43084-12	SAMP	FSS-028-081221	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00529	0.00529	1.96	0.0099	U	0.0324	U	240
160-43084-13	SAMP	FSS-029-081321	Soil	Pu-238	pCi/g	0.0555	0.0623	0.0624	1.96	0.0255		0.0926	U	240
160-43084-13	SAMP	FSS-029-081321	Soil	Pu-239/Pu-240	pCi/g	0.0243	0.0391	0.0391	1.96	0.0128		0.0672	U	240
160-43084-14	SAMP	FSS-030-081321	Soil	Pu-238	pCi/g	0.00338	0.0509	0.0509	1.96	0.0412	U	0.123	U	240
160-43084-14	SAMP	FSS-030-081321	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0297	0.0297	1.96	0.0249	U	0.0904	U	240
160-43084-15	SAMP	FSS-031-081321	Soil	Pu-238	pCi/g	-0.0277	0.0181	0.0182	1.96	0.0340	U	0.105	U	240
160-43084-15	SAMP	FSS-031-081321	Soil	Pu-239/Pu-240	pCi/g	0.0339	0.0423	0.0424	1.96	0.0113		0.0596	U	240
160-43084-16	SAMP	FSS-032-081321	Soil	Pu-238	pCi/g	0.0253	0.0525	0.0526	1.96	0.0343	U	0.102	U	240
160-43084-16	SAMP	FSS-032-081321	Soil	Pu-239/Pu-240	pCi/g	0.0337	0.0382	0.0383	1.96	0.0103		0.0337		240
160-43084-17	SAMP	FSS-033-081321	Soil	Pu-238	pCi/g	-0.00282	0.0254	0.0254	1.96	0.0232	U	0.0803	U	240
160-43084-17	SAMP	FSS-033-081321	Soil	Pu-239/Pu-240	pCi/g	0.00283	0.0242	0.0242	1.96	0.0180	U	0.0699	U	240
160-43084-18	SAMP	FSS-034-081321	Soil	Pu-238	pCi/g	0.0226	0.0469	0.0469	1.96	0.0306	U	0.0913	U	240
160-43084-18	SAMP	FSS-034-081321	Soil	Pu-239/Pu-240	pCi/g	-0.01	0.0241	0.0241	1.96	0.0261	U	0.0824	U	240
160-43084-19	SAMP	FSS-035-081321	Soil	Pu-238	pCi/g	0.0338	0.0355	0.0356	1.96	0.0127		0.0492	U	240
160-43084-19	SAMP	FSS-035-081321	Soil	Pu-239/Pu-240	pCi/g	0.0159	0.0221	0.0221	1.96	0.0073		0.0239	U	240
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	Pu-238	pCi/g	0.0359	0.0448	0.0449	1.96	0.0233		0.0736	U	240
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	Pu-239/Pu-240	pCi/g	0.008983	0.0176	0.0176	1.96	0.0083		0.027	U	240
160-43084-2	SAMP	FSS-018-081221	Soil	Pu-238	pCi/g	0.043	0.0473	0.0475	1.96	0.0215		0.0718	U	240
160-43084-2	SAMP	FSS-018-081221	Soil	Pu-239/Pu-240	pCi/g	0.00239	0.0204	0.0204	1.96	0.0152	U	0.0592	U	240
160-43084-20	SAMP	FSS-036-081321	Soil	Pu-238	pCi/g	0.0228	0.0337	0.0338	1.96	0.0170		0.0589	U	240
160-43084-20	SAMP	FSS-036-081321	Soil	Pu-239/Pu-240	pCi/g	-0.00622	0.00704	0.00706	1.96	0.0132	U	0.0513	U	240
160-43084-21	SAMP	FSS-037-081321	Soil	Pu-238	pCi/g	0.0575	0.0507	0.051	1.96	0.0136		0.0586	U	240
160-43084-21	SAMP	FSS-037-081321	Soil	Pu-239/Pu-240	pCi/g	-0.00262	0.00513	0.00514	1.96	0.0096	U	0.0507	U	240
160-43084-22	SAMP	FSS-038-081321	Soil	Pu-238	pCi/g	0.0343	0.0362	0.0363	1.96	0.0084		0.0443	U	240
160-43084-22	SAMP	FSS-038-081321	Soil	Pu-239/Pu-240	pCi/g	0.00687	0.0185	0.0185	1.96	0.0084	U	0.0443	U	240
160-43084-23	SAMP	FSS-039-081321	Soil	Pu-238	pCi/g	-0.00239	0.00469	0.0047	1.96	0.0088	U	0.0464	U	240
160-43084-23	SAMP	FSS-039-081321	Soil	Pu-239/Pu-240	pCi/g	0.00959	0.0188	0.0188	1.96	0.0088		0.0288	U	240
160-43084-24	SAMP	FSS-040-081321	Soil	Pu-238	pCi/g	0.0573	0.0504	0.0506	1.96	0.0176		0.0638	U	240
160-43084-24	SAMP	FSS-040-081321	Soil	Pu-239/Pu-240	pCi/g	-0.00239	0.00468	0.00469	1.96	0.0088	U	0.0463	U	240
160-43084-25	SAMP	FSS-041-081321	Soil	Pu-238	pCi/g	-0.0175	0.0255	0.0255	1.96	0.0305	U	0.0911	U	240
160-43084-25	SAMP	FSS-041-081321	Soil	Pu-239/Pu-240	pCi/g	0.01	0.0295	0.0295	1.96	0.0184	U	0.0669	U	240
160-43084-26	SAMP	FSS-042-081321	Soil	Pu-238	pCi/g	0.0196	0.0468	0.0468	1.96	0.0308	U	0.0952	U	240
160-43084-26	SAMP	FSS-042-081321	Soil	Pu-239/Pu-240	pCi/g	-0.0028	0.00548	0.00549	1.96	0.0103	U	0.0541	U	240
160-43084-27	SAMP	FSS-043-081321	Soil	Pu-238	pCi/g	-0.00759	0.0238	0.0238	1.96	0.0246	U	0.0797	U	240
160-43084-27	SAMP	FSS-043-081321	Soil	Pu-239/Pu-240	pCi/g	0.0076	0.0205	0.0205	1.96	0.0093	U	0.0491	U	240
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Pu-238	pCi/g	-0.002388	0.00468	0.00469	1.96	0.0088	U	0.0462	U	240
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00469	0.00469	1.96	0.0088	U	0.0287	U	240
160-43084-3	SAMP	FSS-019-081221	Soil	Pu-238	pCi/g	0.0203	0.0485	0.0485	1.96	0.0320	U	0.0987	U	240
160-43084-3	SAMP	FSS-019-081221	Soil	Pu-239/Pu-240	pCi/g	0.0029	0.0248	0.0248	1.96	0.0185	U	0.0717	U	240
160-43084-4	SAMP	FSS-020-081221	Soil	Pu-238	pCi/g	0.0276	0.0506	0.0506	1.96	0.0298	U	0.0963	U	240
160-43084-4	SAMP	FSS-020-081221	Soil	Pu-239/Pu-240	pCi/g	0.00306	0.0262	0.0262	1.96	0.0195	U	0.0758	U	240
160-43084-5	SAMP	FSS-021-081221	Soil	Pu-238	pCi/g	0.00973	0.0626	0.0626	1.96	0.0492	U	0.137	U	240
160-43084-5	SAMP	FSS-021-081221	Soil	Pu-239/Pu-240	pCi/g	0.00325	0.0397	0.0397	1.96	0.0316	U	0.102	U	240
160-43084-6	SAMP	FSS-022-081221	Soil	Pu-238	pCi/g	0.0885	0.0638	0.0642	1.96	0.0171		0.0664		240
160-43084-6	SAMP	FSS-022-081221	Soil	Pu-239/Pu-240	pCi/g	-0.00537	0.00744	0.00746	1.96	0.0140	U	0.0602	U	240
160-43084-7	SAMP	FSS-023-081221	Soil	Pu-238	pCi/g	0.0528	0.049	0.0492	1.96	0.0160		0.0622	U	240

160-43084-7	SAMP	FSS-023-081221	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00493	0.00493	1.96	0.0093	U	0.0302	U	240
160-43084-8	SAMP	FSS-024-081221	Soil	Pu-238	pCi/g	0.0124	0.0456	0.0456	1.96	0.0323	U	0.102	U	240
160-43084-8	SAMP	FSS-024-081221	Soil	Pu-239/Pu-240	pCi/g	0.0249	0.0345	0.0346	1.96	0.0114		0.0373	U	240
160-43084-9	SAMP	FSS-025-081221	Soil	Pu-238	pCi/g	0.00918	0.0365	0.0365	1.96	0.0252	U	0.087	U	240
160-43084-9	SAMP	FSS-025-081221	Soil	Pu-239/Pu-240	pCi/g	-0.00919	0.0104	0.0104	1.96	0.0195	U	0.0758	U	240
LCS 160-523548/2-A	QC_LCS	LCS 160-523548/2-A	Soil	Pu-238	pCi/g	6.137	0.526	0.729	1.96	0.0284		0.0919		240
LCS 160-523548/2-A	QC_LCS	LCS 160-523548/2-A	Soil	Pu-239/Pu-240	pCi/g	6.111	0.527	0.728	1.96	0.0456		0.126		240
LCS 160-523552/2-A	QC_LCS	LCS 160-523552/2-A	Soil	Pu-238	pCi/g	6.21	0.521	0.73	1.96	0.0181		0.0702		240
LCS 160-523552/2-A	QC_LCS	LCS 160-523552/2-A	Soil	Pu-239/Pu-240	pCi/g	6.049	0.514	0.716	1.96	0.0148		0.0636		240
LCS 160-526441/2-A	QC_LCS	LCS 160-526441/2-A	Soil	Pu-238	pCi/g	5.146	0.472	0.634	1.96	0.0103		0.0544		240
LCS 160-526441/2-A	QC_LCS	LCS 160-526441/2-A	Soil	Pu-239/Pu-240	pCi/g	5.736	0.498	0.686	1.96	0.0103		0.0545		240
MB 160-523548/1-A	QC_BLK	MB 160-523548/1-A	Soil	Pu-238	pCi/g	0.06077	0.0689	0.0691	1.96	0.0401		0.112	U	240
MB 160-523548/1-A	QC_BLK	MB 160-523548/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.0291	0.0172	0.0174	1.96	0.0323	U	0.0963	U	240
MB 160-523552/1-A	QC_BLK	MB 160-523552/1-A	Soil	Pu-238	pCi/g	0.04173	0.0459	0.046	1.96	0.0209		0.0696	U	240
MB 160-523552/1-A	QC_BLK	MB 160-523552/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.006961	0.00788	0.0079	1.96	0.0148	U	0.0574	U	240
MB 160-526441/1-A	QC_BLK	MB 160-526441/1-A	Soil	Pu-238	pCi/g	0.00	0.0192	0.0192	1.96	0.0161	U	0.0585	U	240
MB 160-526441/1-A	QC_BLK	MB 160-526441/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.002193	0.0043	0.0043	1.96	0.0081	U	0.0425	U	240
160-43084-1	SAMP	FSS-017-081221	Soil	U-233/U-234	pCi/g	0.129	0.0782	0.0789	1.96	0.0255		0.0826		240
160-43084-1	SAMP	FSS-017-081221	Soil	U-235/U-236	pCi/g	0.0098	0.0264	0.0264	1.96	0.0120	U	0.0632	U	240
160-43084-1	SAMP	FSS-017-081221	Soil	U-238	pCi/g	0.128	0.0746	0.0753	1.96	0.0167		0.0648		240
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	U-233/U-234	pCi/g	0.127	0.0784	0.079	1.96	0.0311		0.0915		240
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	U-235/U-236	pCi/g	-0.003039	0.0273	0.0273	1.96	0.0250	U	0.0865	U	240
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	U-238	pCi/g	0.195	0.0881	0.0895	1.96	0.0179		0.0651		240
160-43084-10	SAMP	FSS-026-081221	Soil	U-233/U-234	pCi/g	0.16	0.0894	0.0904	1.96	0.0378		0.105		240
160-43084-10	SAMP	FSS-026-081221	Soil	U-235/U-236	pCi/g	0.00603	0.0251	0.0251	1.96	0.0157	U	0.0676	U	240
160-43084-10	SAMP	FSS-026-081221	Soil	U-238	pCi/g	0.179	0.083	0.0843	1.96	0.0126		0.0542		240
160-43084-11	SAMP	FSS-027-081221	Soil	U-233/U-234	pCi/g	0.212	0.104	0.105	1.96	0.0390		0.110		240
160-43084-11	SAMP	FSS-027-081221	Soil	U-235/U-236	pCi/g	0.0132	0.0258	0.0259	1.96	0.0121		0.0396	U	240
160-43084-11	SAMP	FSS-027-081221	Soil	U-238	pCi/g	0.182	0.0884	0.0897	1.96	0.0168		0.0654		240
160-43084-12	SAMP	FSS-028-081221	Soil	U-233/U-234	pCi/g	0.28	0.116	0.118	1.96	0.0412		0.113		240
160-43084-12	SAMP	FSS-028-081221	Soil	U-235/U-236	pCi/g	0.0607	0.0564	0.0566	1.96	0.0118		0.0619	U	240
160-43084-12	SAMP	FSS-028-081221	Soil	U-238	pCi/g	0.269	0.105	0.107	1.96	0.0163		0.0634		240
160-43084-13	SAMP	FSS-029-081321	Soil	U-233/U-234	pCi/g	0.0691	0.0687	0.069	1.96	0.0366		0.105	U	240
160-43084-13	SAMP	FSS-029-081321	Soil	U-235/U-236	pCi/g	-0.0232	0.0337	0.0338	1.96	0.0404	U	0.120	U	240
160-43084-13	SAMP	FSS-029-081321	Soil	U-238	pCi/g	0.141	0.0817	0.0826	1.96	0.0258		0.0835		240
160-43084-14	SAMP	FSS-030-081321	Soil	U-233/U-234	pCi/g	0.0871	0.0932	0.0935	1.96	0.0574		0.151	U	240
160-43084-14	SAMP	FSS-030-081321	Soil	U-235/U-236	pCi/g	0.00747	0.0311	0.0311	1.96	0.0194	U	0.0837	U	240
160-43084-14	SAMP	FSS-030-081321	Soil	U-238	pCi/g	0.0809	0.0677	0.0681	1.96	0.0246		0.0852	U	240
160-43084-15	SAMP	FSS-031-081321	Soil	U-233/U-234	pCi/g	0.111	0.0762	0.0767	1.96	0.0306		0.0928		240
160-43084-15	SAMP	FSS-031-081321	Soil	U-235/U-236	pCi/g	0.0459	0.0522	0.0523	1.96	0.0170		0.0734	U	240
160-43084-15	SAMP	FSS-031-081321	Soil	U-238	pCi/g	0.105	0.0691	0.0696	1.96	0.0193		0.0702		240
160-43084-16	SAMP	FSS-032-081321	Soil	U-233/U-234	pCi/g	0.375	0.132	0.135	1.96	0.0398		0.111		240
160-43084-16	SAMP	FSS-032-081321	Soil	U-235/U-236	pCi/g	0.0261	0.0461	0.0462	1.96	0.0240		0.0872	U	240
160-43084-16	SAMP	FSS-032-081321	Soil	U-238	pCi/g	0.246	0.101	0.103	1.96	0.0136		0.0587		240
160-43084-17	SAMP	FSS-033-081321	Soil	U-233/U-234	pCi/g	0.133	0.0728	0.0736	1.96	0.0129		0.0554		240
160-43084-17	SAMP	FSS-033-081321	Soil	U-235/U-236	pCi/g	0.00308	0.0263	0.0263	1.96	0.0196	U	0.0761	U	240
160-43084-17	SAMP	FSS-033-081321	Soil	U-238	pCi/g	0.165	0.0799	0.081	1.96	0.0091		0.0477		240
160-43084-18	SAMP	FSS-034-081321	Soil	U-233/U-234	pCi/g	0.136	0.0764	0.0773	1.96	0.0301		0.0864		240
160-43084-18	SAMP	FSS-034-081321	Soil	U-235/U-236	pCi/g	0.0136	0.0396	0.0396	1.96	0.0265	U	0.0856	U	240
160-43084-18	SAMP	FSS-034-081321	Soil	U-238	pCi/g	0.164	0.0747	0.0759	1.96	0.0080		0.0423		240
160-43084-19	SAMP	FSS-035-081321	Soil	U-233/U-234	pCi/g	0.108	0.0566	0.0573	1.96	0.0097		0.0416		240
160-43084-19	SAMP	FSS-035-081321	Soil	U-235/U-236	pCi/g	0.00693	0.0187	0.0187	1.96	0.0085	U	0.0447	U	240
160-43084-19	SAMP	FSS-035-081321	Soil	U-238	pCi/g	0.122	0.0601	0.0609	1.96	0.0096		0.0415		240
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	U-233/U-234	pCi/g	0.1119	0.0601	0.0608	1.96	0.0156		0.054		240
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	U-235/U-236	pCi/g	0.01888	0.0262	0.0262	1.96	0.0087		0.0283	U	240
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	U-238	pCi/g	0.1382	0.065	0.066	1.96	0.0121		0.0468		240
160-43084-2	SAMP	FSS-018-081221	Soil	U-233/U-234	pCi/g	0.134	0.0762	0.077	1.96	0.0249		0.0785		240
160-43084-2	SAMP	FSS-018-081221	Soil	U-235/U-236	pCi/g	0.0208	0.0335	0.0336	1.96	0.0110		0.0576	U	240
160-43084-2	SAMP	FSS-018-081221	Soil	U-238	pCi/g	0.205	0.0881	0.0897	1.96	0.0124		0.0535		240
160-43084-20	SAMP	FSS-036-081321	Soil	U-233/U-234	pCi/g	0.244	0.0885	0.0908	1.96	0.0261		0.0742		240
160-43084-20	SAMP	FSS-036-081321	Soil	U-235/U-236	pCi/g	0.0114	0.0265	0.0265	1.96	0.0145	U	0.0564	U	240
160-43084-20	SAMP	FSS-036-081321	Soil	U-238	pCi/g	0.13	0.061	0.0619	1.96	0.0067		0.0354		240
160-43084-21	SAMP	FSS-037-081321	Soil	U-233/U-234	pCi/g	0.097	0.0564	0.0569	1.96	0.0156		0.0541		240

160-43084-21	SAMP	FSS-037-081321	Soil	U-235/U-236	pCi/g	0.00473	0.0197	0.0197	1.96	0.0123	U	0.0530	U	240
160-43084-21	SAMP	FSS-037-081321	Soil	U-238	pCi/g	0.0474	0.0399	0.0401	1.96	0.0121		0.0469		240
160-43084-22	SAMP	FSS-038-081321	Soil	U-233/U-234	pCi/g	0.176	0.0749	0.0763	1.96	0.0184		0.0596		240
160-43084-22	SAMP	FSS-038-081321	Soil	U-235/U-236	pCi/g	0.00	0.00462	0.00462	1.96	0.0087	U	0.0283	U	240
160-43084-22	SAMP	FSS-038-081321	Soil	U-238	pCi/g	0.144	0.0687	0.0697	1.96	0.0197		0.0620		240
160-43084-23	SAMP	FSS-039-081321	Soil	U-233/U-234	pCi/g	0.141	0.0773	0.0782	1.96	0.0319		0.0889		240
160-43084-23	SAMP	FSS-039-081321	Soil	U-235/U-236	pCi/g	0.0288	0.0359	0.0359	1.96	0.0096		0.0506	U	240
160-43084-23	SAMP	FSS-039-081321	Soil	U-238	pCi/g	0.151	0.0721	0.0732	1.96	0.0154		0.056		240
160-43084-24	SAMP	FSS-040-081321	Soil	U-233/U-234	pCi/g	0.169	0.0742	0.0755	1.96	0.0107		0.0462		240
160-43084-24	SAMP	FSS-040-081321	Soil	U-235/U-236	pCi/g	0.00256	0.0219	0.0219	1.96	0.0163	U	0.0634	U	240
160-43084-24	SAMP	FSS-040-081321	Soil	U-238	pCi/g	0.171	0.074	0.0753	1.96	0.0076		0.0398		240
160-43084-25	SAMP	FSS-041-081321	Soil	U-233/U-234	pCi/g	0.094	0.0556	0.0561	1.96	0.0079		0.0256		240
160-43084-25	SAMP	FSS-041-081321	Soil	U-235/U-236	pCi/g	0.00	0.00521	0.00521	1.96	0.0098	U	0.0319	U	240
160-43084-25	SAMP	FSS-041-081321	Soil	U-238	pCi/g	0.0704	0.0507	0.051	1.96	0.0136		0.0528		240
160-43084-26	SAMP	FSS-042-081321	Soil	U-233/U-234	pCi/g	0.0992	0.0652	0.0657	1.96	0.0183		0.0663		240
160-43084-26	SAMP	FSS-042-081321	Soil	U-235/U-236	pCi/g	0.0123	0.0242	0.0242	1.96	0.0114		0.037	U	240
160-43084-26	SAMP	FSS-042-081321	Soil	U-238	pCi/g	0.0446	0.0439	0.0441	1.96	0.0129		0.0555	U	240
160-43084-27	SAMP	FSS-043-081321	Soil	U-233/U-234	pCi/g	0.0884	0.055	0.0555	1.96	0.0109		0.0472		240
160-43084-27	SAMP	FSS-043-081321	Soil	U-235/U-236	pCi/g	0.0105	0.0205	0.0206	1.96	0.0096		0.0314	U	240
160-43084-27	SAMP	FSS-043-081321	Soil	U-238	pCi/g	0.0441	0.041	0.0411	1.96	0.0134		0.052	U	240
160-43084-3	SAMP	FSS-019-081221	Soil	U-233/U-234	pCi/g	0.0475	0.0571	0.0573	1.96	0.0307		0.0931	U	240
160-43084-3	SAMP	FSS-019-081221	Soil	U-235/U-236	pCi/g	0.00	0.00644	0.00644	1.96	0.0121	U	0.0394	U	240
160-43084-3	SAMP	FSS-019-081221	Soil	U-238	pCi/g	0.208	0.0925	0.0941	1.96	0.0097		0.051		240
160-43084-4	SAMP	FSS-020-081221	Soil	U-233/U-234	pCi/g	0.133	0.0756	0.0764	1.96	0.0138		0.0596		240
160-43084-4	SAMP	FSS-020-081221	Soil	U-235/U-236	pCi/g	-0.00662	0.00918	0.00919	1.96	0.0172	U	0.0742	U	240
160-43084-4	SAMP	FSS-020-081221	Soil	U-238	pCi/g	0.0319	0.0429	0.043	1.96	0.0195		0.0709	U	240
160-43084-5	SAMP	FSS-021-081221	Soil	U-233/U-234	pCi/g	0.0201	0.0696	0.0697	1.96	0.0528	U	0.140	U	240
160-43084-5	SAMP	FSS-021-081221	Soil	U-235/U-236	pCi/g	-0.0643	0.0432	0.0435	1.96	0.0617	U	0.166	U	240
160-43084-5	SAMP	FSS-021-081221	Soil	U-238	pCi/g	0.0631	0.066	0.0662	1.96	0.0333		0.101	U	240
160-43084-6	SAMP	FSS-022-081221	Soil	U-233/U-234	pCi/g	0.14	0.0842	0.085	1.96	0.0338		0.0981		240
160-43084-6	SAMP	FSS-022-081221	Soil	U-235/U-236	pCi/g	0.0158	0.0367	0.0367	1.96	0.0202	U	0.0784	U	240
160-43084-6	SAMP	FSS-022-081221	Soil	U-238	pCi/g	0.201	0.0892	0.0907	1.96	0.0093		0.0492		240
160-43084-7	SAMP	FSS-023-081221	Soil	U-233/U-234	pCi/g	0.0329	0.0513	0.0513	1.96	0.0309		0.0921	U	240
160-43084-7	SAMP	FSS-023-081221	Soil	U-235/U-236	pCi/g	0.0346	0.0432	0.0433	1.96	0.0116		0.0609	U	240
160-43084-7	SAMP	FSS-023-081221	Soil	U-238	pCi/g	0.0883	0.0596	0.06	1.96	0.0093		0.0489		240
160-43084-8	SAMP	FSS-024-081221	Soil	U-233/U-234	pCi/g	0.0596	0.0713	0.0715	1.96	0.0437		0.118	U	240
160-43084-8	SAMP	FSS-024-081221	Soil	U-235/U-236	pCi/g	0.0322	0.0447	0.0448	1.96	0.0168		0.0722	U	240
160-43084-8	SAMP	FSS-024-081221	Soil	U-238	pCi/g	0.124	0.0738	0.0745	1.96	0.0190		0.0691		240
160-43084-9	SAMP	FSS-025-081221	Soil	U-233/U-234	pCi/g	0.17	0.093	0.094	1.96	0.0395		0.109		240
160-43084-9	SAMP	FSS-025-081221	Soil	U-235/U-236	pCi/g	0.0123	0.024	0.024	1.96	0.0113		0.0368	U	240
160-43084-9	SAMP	FSS-025-081221	Soil	U-238	pCi/g	0.214	0.0905	0.0922	1.96	0.0090		0.0476		240
LCS 160-523551/2-A	QC_LCS	LCS 160-523551/2-A	Soil	U-233/U-234	pCi/g	6.277	0.48	0.705	1.96	0.0247		0.078		240
LCS 160-523551/2-A	QC_LCS	LCS 160-523551/2-A	Soil	U-238	pCi/g	6.246	0.478	0.702	1.96	0.0175		0.0634		240
LCS 160-523553/2-A	QC_LCS	LCS 160-523553/2-A	Soil	U-233/U-234	pCi/g	5.987	0.427	0.652	1.96	0.0206		0.065		240
LCS 160-523553/2-A	QC_LCS	LCS 160-523553/2-A	Soil	U-238	pCi/g	6.08	0.43	0.66	1.96	0.0126		0.0489		240
MB 160-523551/1-A	QC_BLK	MB 160-523551/1-A	Soil	U-233/U-234	pCi/g	0.01468	0.0555	0.0555	1.96	0.0422	U	0.114	U	240
MB 160-523551/1-A	QC_BLK	MB 160-523551/1-A	Soil	U-235/U-236	pCi/g	0.00	0.00597	0.00597	1.96	0.0112	U	0.0365	U	240
MB 160-523551/1-A	QC_BLK	MB 160-523551/1-A	Soil	U-238	pCi/g	0.004885	0.0203	0.0203	1.96	0.0127	U	0.0547	U	240
MB 160-523553/1-A	QC_BLK	MB 160-523553/1-A	Soil	U-233/U-234	pCi/g	0.01017	0.0236	0.0236	1.96	0.0130	U	0.0503	U	240
MB 160-523553/1-A	QC_BLK	MB 160-523553/1-A	Soil	U-235/U-236	pCi/g	-0.002532	0.00496	0.00497	1.96	0.0093	U	0.049	U	240
MB 160-523553/1-A	QC_BLK	MB 160-523553/1-A	Soil	U-238	pCi/g	0.01015	0.0295	0.0295	1.96	0.0198	U	0.0639	U	240
160-43084-1	SAMP	FSS-017-081221	Soil	C-14	pCi/g	0.855	1.02	1.03	1.96	0.830		1.76	U	20
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	C-14	pCi/g	1.044	0.911	0.918	1.96	0.726		1.54	U	20
160-43084-1 MS	QC_MS	160-43084-1 MS	Soil	C-14	pCi/g	75.61	3.22	8.63	1.96	0.837		1.77		20
160-43084-10	SAMP	FSS-026-081221	Soil	C-14	pCi/g	0.219	0.716	0.716	1.96	0.590	U	1.26	U	20
160-43084-11	SAMP	FSS-027-081221	Soil	C-14	pCi/g	0.919	0.8	0.805	1.96	0.623		1.33	U	20
160-43084-12	SAMP	FSS-028-081221	Soil	C-14	pCi/g	-0.0547	0.689	0.689	1.96	0.585	U	1.25	U	20
160-43084-13	SAMP	FSS-029-081321	Soil	C-14	pCi/g	0.416	0.739	0.741	1.96	0.599	U	1.28	U	20
160-43084-14	SAMP	FSS-030-081321	Soil	C-14	pCi/g	0.0437	0.719	0.719	1.96	0.604	U	1.29	U	20
160-43084-15	SAMP	FSS-031-081321	Soil	C-14	pCi/g	0.0729	0.708	0.708	1.96	0.593	U	1.26	U	20
160-43084-16	SAMP	FSS-032-081321	Soil	C-14	pCi/g	0.493	0.732	0.734	1.96	0.589	U	1.26	U	20
160-43084-17	SAMP	FSS-033-081321	Soil	C-14	pCi/g	1.05	0.783	0.791	1.96	0.601		1.28	U	20
160-43084-18	SAMP	FSS-034-081321	Soil	C-14	pCi/g	0.749	0.761	0.765	1.96	0.599		1.28	U	20

160-43084-19	SAMP	FSS-035-081321	Soil	C-14	pCi/g	0.42	0.651	0.652	1.96	0.526	U	1.12	U	20
160-43084-2	SAMP	FSS-018-081221	Soil	C-14	pCi/g	0.223	1.0	1.0	1.96	0.835	U	1.77	U	20
160-43084-20	SAMP	FSS-036-081321	Soil	C-14	pCi/g	-0.0165	0.691	0.691	1.96	0.587	U	1.25	U	20
160-43084-21	SAMP	FSS-037-081321	Soil	C-14	pCi/g	0.149	0.714	0.715	1.96	0.601	U	1.28	U	20
160-43084-22	SAMP	FSS-038-081321	Soil	C-14	pCi/g	0.852	0.683	0.689	1.96	0.530		1.13	U	20
160-43084-23	SAMP	FSS-039-081321	Soil	C-14	pCi/g	0.592	0.744	0.746	1.96	0.593	U	1.26	U	20
160-43084-24	SAMP	FSS-040-081321	Soil	C-14	pCi/g	0.703	0.787	0.791	1.96	0.623		1.33	U	20
160-43084-25	SAMP	FSS-041-081321	Soil	C-14	pCi/g	0.482	0.763	0.764	1.96	0.615	U	1.31	U	20
160-43084-26	SAMP	FSS-042-081321	Soil	C-14	pCi/g	0.589	0.774	0.776	1.96	0.624	U	1.33	U	20
160-43084-27	SAMP	FSS-043-081321	Soil	C-14	pCi/g	0.574	0.762	0.764	1.96	0.609	U	1.30	U	20
160-43084-3	SAMP	FSS-019-081221	Soil	C-14	pCi/g	0.547	0.979	0.98	1.96	0.790	U	1.67	U	20
160-43084-4	SAMP	FSS-020-081221	Soil	C-14	pCi/g	0.665	0.987	0.99	1.96	0.798	U	1.69	U	20
160-43084-5	SAMP	FSS-021-081221	Soil	C-14	pCi/g	0.701	0.963	0.966	1.96	0.772	U	1.63	U	20
160-43084-6	SAMP	FSS-022-081221	Soil	C-14	pCi/g	1.00	0.945	0.951	1.96	0.740		1.57	U	20
160-43084-7	SAMP	FSS-023-081221	Soil	C-14	pCi/g	0.34	0.934	0.934	1.96	0.762	U	1.61	U	20
160-43084-8	SAMP	FSS-024-081221	Soil	C-14	pCi/g	0.631	0.733	0.736	1.96	0.582		1.24	U	20
160-43084-8 DU	QC_DUP	160-43084-8 DU	Soil	C-14	pCi/g	0.3153	0.697	0.698	1.96	0.571	U	1.22	U	20
160-43084-8 MS	QC_MS	160-43084-8 MS	Soil	C-14	pCi/g	78.04	2.95	8.77	1.96	0.623		1.33		20
160-43084-9	SAMP	FSS-025-081221	Soil	C-14	pCi/g	0.612	0.58	0.584	1.96	0.454		0.968	U	20
LCS 160-526244/2-A	QC_LCS	LCS 160-526244/2-A	Soil	C-14	pCi/g	84.35	3.56	9.61	1.96	0.922		1.95		20
LCS 160-526978/2-A	QC_LCS	LCS 160-526978/2-A	Soil	C-14	pCi/g	85.25	3.07	9.53	1.96	0.622		1.32		20
MB 160-526244/1-A	QC_BLK	MB 160-526244/1-A	Soil	C-14	pCi/g	1.149	1.06	1.06	1.96	0.832		1.76	U	20
MB 160-526978/1-A	QC_BLK	MB 160-526978/1-A	Soil	C-14	pCi/g	0.6081	0.772	0.775	1.96	0.614	U	1.31	U	20
160-43084-1	SAMP	FSS-017-081221	Soil	Cs-137	pCi/g	0.356	0.0811	0.0888	1.96	0.0270		0.0626		30
160-43084-1	SAMP	FSS-017-081221	Soil	Co-60	pCi/g	-0.00306	0.0672	0.0672	1.96	0.0349	U	0.0823	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	K-40	pCi/g	2.43	0.748	0.787	1.96	0.294		0.713		30
160-43084-1	SAMP	FSS-017-081221	Soil	Na-22	pCi/g	-0.0251	0.0484	0.0485	1.96	0.0368	U	0.0856	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Zn-65	pCi/g	-0.0044	0.0778	0.0778	1.96	0.111	U	0.244	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Ra-226	pCi/g	0.331	0.0995	0.105	1.96	0.0382		0.0913		30
160-43084-1	SAMP	FSS-017-081221	Soil	Ac-228	pCi/g	0.160	0.140	0.141	1.96	0.133		0.298	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Eu-155	pCi/g	0.0263	0.084	0.0841	1.96	0.177	U	0.366	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Am-241	pCi/g	0.088	0.0898	0.0902	1.96	0.0567		0.123	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Eu-152	pCi/g	0.0477	0.0946	0.0948	1.96	0.0769	U	0.162	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Bi-214	pCi/g	0.331	0.0995	0.105	1.96	0.0382		0.0913		30
160-43084-1	SAMP	FSS-017-081221	Soil	Bi-212	pCi/g	-0.144	0.694	0.694	1.96	0.5701	U	1.24	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Pb-214	pCi/g	0.293	0.0894	0.0942	1.96	0.0398		0.092		30
160-43084-1	SAMP	FSS-017-081221	Soil	Pb-212	pCi/g	0.279	0.0788	0.0864	1.96	0.0456		0.0994		30
160-43084-1	SAMP	FSS-017-081221	Soil	Eu-154	pCi/g	0.0385	0.0717	0.0718	1.96	0.0505	U	0.107	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Th-232	pCi/g	0.16	0.14	0.141	1.96	0.133		0.298	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Cs-137	pCi/g	0.0175	0.0524	0.0524	1.96	0.0424	U	0.0928	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Co-60	pCi/g	-0.0559	0.0941	0.0942	1.96	0.0465	U	0.105	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	K-40	pCi/g	3.68	0.854	0.931	1.96	0.277		0.672		30
160-43084-10	SAMP	FSS-026-081221	Soil	Na-22	pCi/g	0.0376	0.0246	0.0249	1.96	0.0097		0.0308		30
160-43084-10	SAMP	FSS-026-081221	Soil	Zn-65	pCi/g	-0.00415	0.0773	0.0773	1.96	0.105	U	0.230	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Ra-226	pCi/g	0.265	0.0887	0.0927	1.96	0.0373		0.0887		30
160-43084-10	SAMP	FSS-026-081221	Soil	Ac-228	pCi/g	0.433	0.169	0.174	1.96	0.0971		0.224		30
160-43084-10	SAMP	FSS-026-081221	Soil	Eu-155	pCi/g	0.027	0.0748	0.0748	1.96	0.147	U	0.305	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Am-241	pCi/g	0.0426	0.144	0.144	1.96	0.119	U	0.247	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Eu-152	pCi/g	0.145	0.105	0.106	1.96	0.0625		0.133		30
160-43084-10	SAMP	FSS-026-081221	Soil	Bi-214	pCi/g	0.265	0.0887	0.0927	1.96	0.0373		0.0887		30
160-43084-10	SAMP	FSS-026-081221	Soil	Bi-212	pCi/g	0.0361	0.588	0.588	1.96	0.4907	U	1.08	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Pb-214	pCi/g	0.338	0.102	0.107	1.96	0.0382		0.088		30
160-43084-10	SAMP	FSS-026-081221	Soil	Pb-212	pCi/g	0.324	0.0852	0.0946	1.96	0.0510		0.11		30
160-43084-10	SAMP	FSS-026-081221	Soil	Eu-154	pCi/g	0.00147	0.00261	0.00262	1.96	0.0578	U	0.121	U	30
160-43084-10	SAMP	FSS-026-081221	Soil	Th-232	pCi/g	0.433	0.169	0.174	1.96	0.0971		0.224		30
160-43084-11	SAMP	FSS-027-081221	Soil	Cs-137	pCi/g	-0.0401	0.0617	0.0618	1.96	0.0493	U	0.105	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Co-60	pCi/g	0.00115	0.038	0.038	1.96	0.0192	U	0.0477	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	K-40	pCi/g	3.38	0.732	0.807	1.96	0.2330		0.561		30
160-43084-11	SAMP	FSS-027-081221	Soil	Na-22	pCi/g	0.0145	0.0259	0.0259	1.96	0.0185	U	0.0461	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Zn-65	pCi/g	-0.0553	0.122	0.122	1.96	0.0981	U	0.212	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Ra-226	pCi/g	0.259	0.0825	0.0866	1.96	0.0378		0.0868		30
160-43084-11	SAMP	FSS-027-081221	Soil	Ac-228	pCi/g	0.344	0.165	0.169	1.96	0.103		0.230		30
160-43084-11	SAMP	FSS-027-081221	Soil	Eu-155	pCi/g	0.0395	0.134	0.134	1.96	0.179	U	0.367	U	30

160-43084-11	SAMP	FSS-027-081221	Soil	Am-241	pCi/g	0.0146	0.121	0.121	1.96	0.101	U	0.209	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Eu-152	pCi/g	0.112	0.0868	0.0875	1.96	0.0729		0.152	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Bi-214	pCi/g	0.259	0.0825	0.0866	1.96	0.0378		0.0868		30
160-43084-11	SAMP	FSS-027-081221	Soil	Bi-212	pCi/g	0.252	0.491	0.492	1.96	0.3885	U	0.854	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Pb-214	pCi/g	0.265	0.0779	0.0825	1.96	0.0346		0.0784		30
160-43084-11	SAMP	FSS-027-081221	Soil	Pb-212	pCi/g	0.381	0.0677	0.0832	1.96	0.0303		0.0666		30
160-43084-11	SAMP	FSS-027-081221	Soil	Eu-154	pCi/g	0.0272	0.0445	0.0446	1.96	0.0409	U	0.0864	U	30
160-43084-11	SAMP	FSS-027-081221	Soil	Th-232	pCi/g	0.344	0.165	0.169	1.96	0.103		0.23		30
160-43084-12	SAMP	FSS-028-081221	Soil	Cs-137	pCi/g	0.0327	0.063	0.0631	1.96	0.0504	U	0.109	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Co-60	pCi/g	0.0307	0.0227	0.0229	1.96	0.0102		0.0323	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	K-40	pCi/g	3.82	0.874	0.955	1.96	0.2806		0.681		30
160-43084-12	SAMP	FSS-028-081221	Soil	Na-22	pCi/g	-0.00706	0.0398	0.0398	1.96	0.0322	U	0.076	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Zn-65	pCi/g	0.0411	0.109	0.109	1.96	0.0866	U	0.194	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Ra-226	pCi/g	0.227	0.0952	0.098	1.96	0.0456		0.105		30
160-43084-12	SAMP	FSS-028-081221	Soil	Ac-228	pCi/g	0.674	0.186	0.198	1.96	0.0568		0.144		30
160-43084-12	SAMP	FSS-028-081221	Soil	Eu-155	pCi/g	-0.00429	0.159	0.159	1.96	0.151	U	0.313	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Am-241	pCi/g	0.0105	0.146	0.146	1.96	0.123	U	0.255	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Eu-152	pCi/g	0.0834	0.12	0.12	1.96	0.0691		0.146	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Bi-214	pCi/g	0.227	0.0952	0.098	1.96	0.0456		0.105		30
160-43084-12	SAMP	FSS-028-081221	Soil	Bi-212	pCi/g	-0.453	0.774	0.775	1.96	0.6149	U	1.33	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Pb-214	pCi/g	0.407	0.1	0.109	1.96	0.0350		0.0818		30
160-43084-12	SAMP	FSS-028-081221	Soil	Pb-212	pCi/g	0.331	0.0891	0.0984	1.96	0.0547		0.117		30
160-43084-12	SAMP	FSS-028-081221	Soil	Eu-154	pCi/g	0.0733	0.0882	0.0886	1.96	0.0503		0.106	U	30
160-43084-12	SAMP	FSS-028-081221	Soil	Th-232	pCi/g	0.674	0.186	0.198	1.96	0.0568		0.144		30
160-43084-13	SAMP	FSS-029-081321	Soil	Cs-137	pCi/g	0.00	0.0457	0.0457	1.96	0.0429	U	0.0924	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Co-60	pCi/g	-0.00443	0.00799	0.008	1.96	0.0347	U	0.0792	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	K-40	pCi/g	5.57	0.933	1.09	1.96	0.243		0.586		30
160-43084-13	SAMP	FSS-029-081321	Soil	Na-22	pCi/g	-0.0545	0.0581	0.0584	1.96	0.0432	U	0.0959	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Zn-65	pCi/g	0.00	0.0515	0.0515	1.96	0.0946	U	0.206	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Ra-226	pCi/g	0.285	0.0877	0.0923	1.96	0.0378		0.0872		30
160-43084-13	SAMP	FSS-029-081321	Soil	Ac-228	pCi/g	0.452	0.114	0.123	1.96	0.0679		0.161		30
160-43084-13	SAMP	FSS-029-081321	Soil	Eu-155	pCi/g	-0.000837	0.129	0.129	1.96	0.183	U	0.375	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Am-241	pCi/g	0.0755	0.11	0.111	1.96	0.0894	U	0.187	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Eu-152	pCi/g	0.0598	0.0902	0.0904	1.96	0.0538		0.114	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Bi-214	pCi/g	0.285	0.0877	0.0923	1.96	0.0378		0.0872		30
160-43084-13	SAMP	FSS-029-081321	Soil	Bi-212	pCi/g	0.287	0.466	0.467	1.96	0.361	U	0.802	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Pb-214	pCi/g	0.29	0.0767	0.0822	1.96	0.0493		0.108		30
160-43084-13	SAMP	FSS-029-081321	Soil	Pb-212	pCi/g	0.448	0.0717	0.0915	1.96	0.0280		0.0624		30
160-43084-13	SAMP	FSS-029-081321	Soil	Eu-154	pCi/g	0.00817	0.00999	0.01	1.96	0.0503	U	0.105	U	30
160-43084-13	SAMP	FSS-029-081321	Soil	Th-232	pCi/g	0.452	0.114	0.123	1.96	0.0679		0.161		30
160-43084-14	SAMP	FSS-030-081321	Soil	Cs-137	pCi/g	-0.00281	0.047	0.047	1.96	0.0431	U	0.0944	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Co-60	pCi/g	0.024	0.0157	0.0158	1.96	0.0238		0.0597	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	K-40	pCi/g	3.32	0.83	0.895	1.96	0.284		0.688		30
160-43084-14	SAMP	FSS-030-081321	Soil	Na-22	pCi/g	0.00714	0.0295	0.0295	1.96	0.0230	U	0.0577	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Zn-65	pCi/g	-0.00425	0.13	0.13	1.96	0.0723	U	0.165	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Ra-226	pCi/g	0.22	0.0933	0.096	1.96	0.0369		0.0881		30
160-43084-14	SAMP	FSS-030-081321	Soil	Ac-228	pCi/g	0.189	0.102	0.104	1.96	0.0574		0.146		30
160-43084-14	SAMP	FSS-030-081321	Soil	Eu-155	pCi/g	-0.00433	0.147	0.147	1.96	0.148	U	0.307	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Am-241	pCi/g	0.0543	0.136	0.136	1.96	0.112	U	0.233	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Eu-152	pCi/g	0.00964	0.0173	0.0173	1.96	0.0816	U	0.172	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Bi-214	pCi/g	0.22	0.0933	0.096	1.96	0.0369		0.0881		30
160-43084-14	SAMP	FSS-030-081321	Soil	Bi-212	pCi/g	-0.333	0.764	0.765	1.96	0.616	U	1.33	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Pb-214	pCi/g	0.189	0.103	0.105	1.96	0.0746		0.161		30
160-43084-14	SAMP	FSS-030-081321	Soil	Pb-212	pCi/g	0.241	0.0773	0.0831	1.96	0.0478		0.104		30
160-43084-14	SAMP	FSS-030-081321	Soil	Eu-154	pCi/g	0.0731	0.0945	0.0948	1.96	0.0543		0.114	U	30
160-43084-14	SAMP	FSS-030-081321	Soil	Th-232	pCi/g	0.189	0.102	0.104	1.96	0.0574		0.146		30
160-43084-15	SAMP	FSS-031-081321	Soil	Cs-137	pCi/g	0.0182	0.0406	0.0406	1.96	0.0322	U	0.0712	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Co-60	pCi/g	-0.00608	0.041	0.041	1.96	0.0202	U	0.0503	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	K-40	pCi/g	2.65	0.612	0.667	1.96	0.0857		0.271		30
160-43084-15	SAMP	FSS-031-081321	Soil	Na-22	pCi/g	0.0387	0.0229	0.0232	1.96	0.0082		0.026		30
160-43084-15	SAMP	FSS-031-081321	Soil	Zn-65	pCi/g	0.00	0.0123	0.0123	1.96	0.0619	U	0.141	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Ra-226	pCi/g	-0.0148	0.102	0.102	1.96	0.0850	U	0.182	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Ac-228	pCi/g	0.279	0.0924	0.0965	1.96	0.0217		0.0687		30

160-43084-15	SAMP	FSS-031-081321	Soil	Eu-155	pCi/g	0.0169	0.0635	0.0635	1.96	0.188	U	0.385	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Am-241	pCi/g	0.0458	0.0966	0.0967	1.96	0.0789	U	0.166	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Eu-152	pCi/g	0.107	0.0506	0.0518	1.96	0.0537		0.114	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Bi-214	pCi/g	-0.0148	0.102	0.102	1.96	0.0850	U	0.182	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Bi-212	pCi/g	0.186	0.489	0.489	1.96	0.392	U	0.865	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Pb-214	pCi/g	0.168	0.0948	0.0964	1.96	0.0466		0.103		30
160-43084-15	SAMP	FSS-031-081321	Soil	Pb-212	pCi/g	0.206	0.0527	0.0588	1.96	0.0253		0.0571		30
160-43084-15	SAMP	FSS-031-081321	Soil	Eu-154	pCi/g	0.0116	0.0451	0.0452	1.96	0.0372	U	0.0792	U	30
160-43084-15	SAMP	FSS-031-081321	Soil	Th-232	pCi/g	0.279	0.0924	0.0965	1.96	0.0217		0.0687		30
160-43084-16	SAMP	FSS-032-081321	Soil	Cs-137	pCi/g	0.0403	0.0623	0.0624	1.96	0.0490	U	0.106	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Co-60	pCi/g	0.0301	0.0241	0.0243	1.96	0.012		0.037	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	K-40	pCi/g	3.86	0.915	0.993	1.96	0.224		0.587		30
160-43084-16	SAMP	FSS-032-081321	Soil	Na-22	pCi/g	-0.00161	0.0341	0.0341	1.96	0.0283	U	0.0697	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Zn-65	pCi/g	-0.0222	0.0689	0.0689	1.96	0.128	U	0.28	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Ra-226	pCi/g	0.406	0.145	0.151	1.96	0.0589		0.132		30
160-43084-16	SAMP	FSS-032-081321	Soil	Ac-228	pCi/g	0.835	0.198	0.215	1.96	0.0286		0.0904		30
160-43084-16	SAMP	FSS-032-081321	Soil	Eu-155	pCi/g	-0.149	0.199	0.199	1.96	0.371	U	0.751	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Am-241	pCi/g	0.0945	0.164	0.164	1.96	0.135	U	0.279	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Eu-152	pCi/g	0.126	0.182	0.182	1.96	0.0759		0.159	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Bi-214	pCi/g	0.406	0.145	0.151	1.96	0.0589		0.132		30
160-43084-16	SAMP	FSS-032-081321	Soil	Bi-212	pCi/g	0.0193	0.761	0.761	1.96	0.638	U	1.38	U	30
160-43084-16	SAMP	FSS-032-081321	Soil	Pb-214	pCi/g	0.504	0.116	0.127	1.96	0.0610		0.133		30
160-43084-16	SAMP	FSS-032-081321	Soil	Pb-212	pCi/g	0.661	0.117	0.144	1.96	0.0710		0.149		30
160-43084-16	SAMP	FSS-032-081321	Soil	Eu-154	pCi/g	0.157	0.058	0.0602	1.96	0.0517		0.108		30
160-43084-16	SAMP	FSS-032-081321	Soil	Th-232	pCi/g	0.835	0.198	0.215	1.96	0.0286		0.0904		30
160-43084-17	SAMP	FSS-033-081321	Soil	Cs-137	pCi/g	0.405	0.0669	0.0786	1.96	0.0067		0.0212		30
160-43084-17	SAMP	FSS-033-081321	Soil	Co-60	pCi/g	-0.00315	0.00542	0.00543	1.96	0.0381	U	0.0887	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	K-40	pCi/g	2.51	0.718	0.76	1.96	0.2053		0.538		30
160-43084-17	SAMP	FSS-033-081321	Soil	Na-22	pCi/g	-0.00147	0.0312	0.0312	1.96	0.0259	U	0.0638	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Zn-65	pCi/g	-0.0203	0.101	0.101	1.96	0.0777	U	0.176	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Ra-226	pCi/g	-0.0244	0.114	0.114	1.96	0.111	U	0.235	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Ac-228	pCi/g	0.0646	0.182	0.182	1.96	0.0881	U	0.207	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Eu-155	pCi/g	0.0847	0.285	0.286	1.96	0.238	U	0.485	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Am-241	pCi/g	0.0575	0.0953	0.0954	1.96	0.0774	U	0.162	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Eu-152	pCi/g	0.193	0.0945	0.0965	1.96	0.0507		0.108		30
160-43084-17	SAMP	FSS-033-081321	Soil	Bi-214	pCi/g	-0.0244	0.114	0.114	1.96	0.111	U	0.235	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Bi-212	pCi/g	-0.265	0.564	0.564	1.96	0.446	U	0.988	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Pb-214	pCi/g	-0.00502	0.151	0.151	1.96	0.127	U	0.263	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Pb-212	pCi/g	0.297	0.0928	0.1	1.96	0.0375		0.0813		30
160-43084-17	SAMP	FSS-033-081321	Soil	Eu-154	pCi/g	-0.00641	0.0526	0.0526	1.96	0.0439	U	0.0921	U	30
160-43084-17	SAMP	FSS-033-081321	Soil	Th-232	pCi/g	0.0646	0.182	0.182	1.96	0.0881	U	0.207	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Cs-137	pCi/g	0.0275	0.0518	0.0519	1.96	0.0414	U	0.0895	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Co-60	pCi/g	-0.0159	0.0588	0.0588	1.96	0.0288	U	0.0676	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	K-40	pCi/g	2.00	0.615	0.646	1.96	0.248		0.596		30
160-43084-18	SAMP	FSS-034-081321	Soil	Na-22	pCi/g	0.00118	0.0237	0.0237	1.96	0.0197	U	0.049	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Zn-65	pCi/g	0.00	0.0123	0.0123	1.96	0.107	U	0.230	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Ra-226	pCi/g	0.259	0.0943	0.0979	1.96	0.0435		0.0988		30
160-43084-18	SAMP	FSS-034-081321	Soil	Ac-228	pCi/g	0.473	0.146	0.154	1.96	0.0691		0.164		30
160-43084-18	SAMP	FSS-034-081321	Soil	Eu-155	pCi/g	-0.0522	0.0759	0.0761	1.96	0.0913	U	0.192	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Am-241	pCi/g	0.0899	0.0838	0.0843	1.96	0.0461		0.10	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Eu-152	pCi/g	0.111	0.0604	0.0615	1.96	0.0512		0.109		30
160-43084-18	SAMP	FSS-034-081321	Soil	Bi-214	pCi/g	0.259	0.0943	0.0979	1.96	0.0435		0.0988		30
160-43084-18	SAMP	FSS-034-081321	Soil	Bi-212	pCi/g	0.0202	0.495	0.495	1.96	0.414	U	0.91	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Pb-214	pCi/g	0.223	0.0656	0.0695	1.96	0.0375		0.0848		30
160-43084-18	SAMP	FSS-034-081321	Soil	Pb-212	pCi/g	0.401	0.074	0.0898	1.96	0.0284		0.0632		30
160-43084-18	SAMP	FSS-034-081321	Soil	Eu-154	pCi/g	0.00742	0.0135	0.0135	1.96	0.0482	U	0.101	U	30
160-43084-18	SAMP	FSS-034-081321	Soil	Th-232	pCi/g	0.473	0.146	0.154	1.96	0.0691		0.164		30
160-43084-19	SAMP	FSS-035-081321	Soil	Cs-137	pCi/g	-0.0234	0.0432	0.0433	1.96	0.0342	U	0.0749	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Co-60	pCi/g	0.0154	0.0415	0.0415	1.96	0.0197	U	0.0491	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	K-40	pCi/g	2.33	0.567	0.613	1.96	0.0835		0.264		30
160-43084-19	SAMP	FSS-035-081321	Soil	Na-22	pCi/g	0.0172	0.015	0.0151	1.96	0.0080		0.0253	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Zn-65	pCi/g	0.00	0.0239	0.0239	1.96	0.0791	U	0.175	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Ra-226	pCi/g	0.128	0.0649	0.0662	1.96	0.107		0.225	U	30

160-43084-19	SAMP	FSS-035-081321	Soil	Ac-228	pCi/g	0.0969	0.172	0.172	1.96	0.106	U	0.236	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Eu-155	pCi/g	0.0514	0.174	0.174	1.96	0.145	U	0.298	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Am-241	pCi/g	0.00477	0.0967	0.0967	1.96	0.0612	U	0.13	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Eu-152	pCi/g	0.0969	0.0951	0.0956	1.96	0.0589		0.124	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Bi-214	pCi/g	0.128	0.0649	0.0662	1.96	0.107		0.225	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Bi-212	pCi/g	0.234	0.384	0.385	1.96	0.2928	U	0.665	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Pb-214	pCi/g	0.285	0.0604	0.067	1.96	0.0302		0.0699		30
160-43084-19	SAMP	FSS-035-081321	Soil	Pb-212	pCi/g	0.299	0.0589	0.07	1.96	0.0244		0.055		30
160-43084-19	SAMP	FSS-035-081321	Soil	Eu-154	pCi/g	0.0666	0.0349	0.0355	1.96	0.0375		0.0797	U	30
160-43084-19	SAMP	FSS-035-081321	Soil	Th-232	pCi/g	0.0969	0.172	0.172	1.96	0.106	U	0.236	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Cs-137	pCi/g	0.351	0.0591	0.0691	1.96	0.0104		0.027		30
160-43084-2	SAMP	FSS-018-081221	Soil	Co-60	pCi/g	0.026	0.0154	0.0156	1.96	0.0189		0.0471	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	K-40	pCi/g	4.81	0.798	0.932	1.96	0.0801		0.253		30
160-43084-2	SAMP	FSS-018-081221	Soil	Na-22	pCi/g	-0.0505	0.0547	0.055	1.96	0.0408	U	0.0906	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Zn-65	pCi/g	-0.0449	0.117	0.118	1.96	0.0951	U	0.206	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Ra-226	pCi/g	0.286	0.0862	0.091	1.96	0.0365		0.084		30
160-43084-2	SAMP	FSS-018-081221	Soil	Ac-228	pCi/g	0.373	0.131	0.136	1.96	0.0786		0.181		30
160-43084-2	SAMP	FSS-018-081221	Soil	Eu-155	pCi/g	0.0573	0.199	0.199	1.96	0.1658	U	0.340	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Am-241	pCi/g	0.0462	0.0869	0.087	1.96	0.0534	U	0.114	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Eu-152	pCi/g	-0.0367	0.0821	0.0822	1.96	0.0673	U	0.141	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Bi-214	pCi/g	0.286	0.0862	0.091	1.96	0.0365		0.084		30
160-43084-2	SAMP	FSS-018-081221	Soil	Bi-212	pCi/g	0.159	0.262	0.263	1.96	0.191	U	0.458	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Pb-214	pCi/g	0.283	0.081	0.086	1.96	0.0335		0.0759		30
160-43084-2	SAMP	FSS-018-081221	Soil	Pb-212	pCi/g	0.365	0.0983	0.109	1.96	0.0682		0.142		30
160-43084-2	SAMP	FSS-018-081221	Soil	Eu-154	pCi/g	0.0338	0.0547	0.0548	1.96	0.0446	U	0.0937	U	30
160-43084-2	SAMP	FSS-018-081221	Soil	Th-232	pCi/g	0.373	0.131	0.136	1.96	0.0786		0.181		30
160-43084-20	SAMP	FSS-036-081321	Soil	Cs-137	pCi/g	-0.0283	0.115	0.115	1.96	0.0384	U	0.0857	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Co-60	pCi/g	-0.0016	0.0498	0.0498	1.96	0.0259	U	0.0648	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	K-40	pCi/g	0.996	1.04	1.04	1.96	0.547		1.22	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Na-22	pCi/g	0.00	0.00912	0.00912	1.96	0.0108	U	0.0343	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Zn-65	pCi/g	0.0412	0.133	0.133	1.96	0.108	U	0.238	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Ra-226	pCi/g	0.108	0.0991	0.0997	1.96	0.166	U	0.347	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Ac-228	pCi/g	0.306	0.198	0.201	1.96	0.0882		0.210		30
160-43084-20	SAMP	FSS-036-081321	Soil	Eu-155	pCi/g	0.0179	0.0486	0.0486	1.96	0.103	U	0.219	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Am-241	pCi/g	0.0656	0.164	0.164	1.96	0.135	U	0.281	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Eu-152	pCi/g	0.129	0.0673	0.0686	1.96	0.0870		0.183	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Bi-214	pCi/g	0.108	0.0991	0.0997	1.96	0.166	U	0.347	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Bi-212	pCi/g	-0.0201	0.576	0.576	1.96	0.482	U	1.07	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Pb-214	pCi/g	0.0716	0.126	0.126	1.96	0.0928	U	0.199	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Pb-212	pCi/g	0.339	0.0963	0.105	1.96	0.0485		0.106		30
160-43084-20	SAMP	FSS-036-081321	Soil	Eu-154	pCi/g	0.0616	0.0967	0.0969	1.96	0.0559		0.118	U	30
160-43084-20	SAMP	FSS-036-081321	Soil	Th-232	pCi/g	0.306	0.198	0.201	1.96	0.0882		0.210		30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Cs-137	pCi/g	0.00	0.0295	0.0295	1.96	0.0374	U	0.0835	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Co-60	pCi/g	-0.01369	0.0904	0.0905	1.96	0.0426	U	0.0991	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	K-40	pCi/g	1.42	0.881	0.892	1.96	0.383		0.908		30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Na-22	pCi/g	-0.04274	0.0564	0.0565	1.96	0.0409	U	0.0952	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Zn-65	pCi/g	-0.02265	0.0632	0.0632	1.96	0.0891	U	0.202	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Ra-226	pCi/g	0.129	0.0928	0.0937	1.96	0.151	U	0.316	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Ac-228	pCi/g	0.4166	0.111	0.119	1.96	0.0696		0.173		30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Eu-155	pCi/g	-0.000533	0.137	0.137	1.96	0.261	U	0.531	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Am-241	pCi/g	0.06013	0.104	0.104	1.96	0.0843	U	0.177	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Eu-152	pCi/g	0.1263	0.0873	0.0882	1.96	0.0684		0.144	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Bi-214	pCi/g	0.129	0.0928	0.0937	1.96	0.151	U	0.316	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Bi-212	pCi/g	0.3216	0.534	0.535	1.96	0.409	U	0.924	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Pb-214	pCi/g	0.3002	0.0817	0.0872	1.96	0.0280		0.0674		30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Pb-212	pCi/g	0.2821	0.0831	0.0905	1.96	0.0533		0.114		30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Eu-154	pCi/g	-0.04787	0.0676	0.0678	1.96	0.0547	U	0.114	U	30
160-43084-20 DU	QC_DUP	160-43084-20 DU	Soil	Th-232	pCi/g	0.4166	0.111	0.119	1.96	0.0696		0.173		30
160-43084-21	SAMP	FSS-037-081321	Soil	Cs-137	pCi/g	0.0198	0.0468	0.0468	1.96	0.0371	U	0.0826	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Co-60	pCi/g	0.00299	0.0466	0.0466	1.96	0.0241	U	0.0603	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	K-40	pCi/g	2.08	0.836	0.862	1.96	0.376		0.873		30
160-43084-21	SAMP	FSS-037-081321	Soil	Na-22	pCi/g	0.00721	0.0298	0.0298	1.96	0.0233	U	0.0583	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Zn-65	pCi/g	-0.0043	0.0853	0.0853	1.96	0.0943	U	0.210	U	30

160-43084-21	SAMP	FSS-037-081321	Soil	Ra-226	pCi/g	-0.00434	0.0146	0.0146	1.96	0.140	U	0.294	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Ac-228	pCi/g	0.339	0.158	0.162	1.96	0.101		0.232		30
160-43084-21	SAMP	FSS-037-081321	Soil	Eu-155	pCi/g	-0.00438	0.209	0.209	1.96	0.150	U	0.312	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Am-241	pCi/g	0.0549	0.137	0.137	1.96	0.113	U	0.235	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Eu-152	pCi/g	0.136	0.118	0.118	1.96	0.0687		0.146	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Bi-214	pCi/g	-0.00434	0.0146	0.0146	1.96	0.140	U	0.294	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Bi-212	pCi/g	0.0125	0.694	0.694	1.96	0.582	U	1.27	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Pb-214	pCi/g	0.332	0.0944	0.10	1.96	0.0350		0.082		30
160-43084-21	SAMP	FSS-037-081321	Soil	Pb-212	pCi/g	0.328	0.0872	0.0966	1.96	0.0521		0.112		30
160-43084-21	SAMP	FSS-037-081321	Soil	Eu-154	pCi/g	0.061	0.099	0.0992	1.96	0.0494		0.105	U	30
160-43084-21	SAMP	FSS-037-081321	Soil	Th-232	pCi/g	0.339	0.158	0.162	1.96	0.101		0.232		30
160-43084-22	SAMP	FSS-038-081321	Soil	Cs-137	pCi/g	0.0829	0.0372	0.0382	1.96	0.0123		0.0324		30
160-43084-22	SAMP	FSS-038-081321	Soil	Co-60	pCi/g	0.00493	0.00829	0.0083	1.96	0.0384	U	0.0892	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	K-40	pCi/g	4.45	0.933	1.03	1.96	0.206		0.541		30
160-43084-22	SAMP	FSS-038-081321	Soil	Na-22	pCi/g	-0.00148	0.0314	0.0314	1.96	0.0261	U	0.0641	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Zn-65	pCi/g	0.0383	0.107	0.107	1.96	0.0850	U	0.191	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Ra-226	pCi/g	0.096	0.125	0.126	1.96	0.128	U	0.270	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Ac-228	pCi/g	0.346	0.214	0.216	1.96	0.0886		0.208		30
160-43084-22	SAMP	FSS-038-081321	Soil	Eu-155	pCi/g	0.0375	0.272	0.272	1.96	0.228	U	0.464	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Am-241	pCi/g	0.0327	0.135	0.135	1.96	0.112	U	0.232	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Eu-152	pCi/g	0.125	0.0874	0.0883	1.96	0.0645		0.135	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Bi-214	pCi/g	0.096	0.125	0.126	1.96	0.128	U	0.27	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Bi-212	pCi/g	0.0916	0.571	0.571	1.96	0.471	U	1.04	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Pb-214	pCi/g	0.0525	0.135	0.135	1.96	0.119	U	0.248	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Pb-212	pCi/g	0.398	0.124	0.134	1.96	0.0521		0.111		30
160-43084-22	SAMP	FSS-038-081321	Soil	Eu-154	pCi/g	0.0448	0.0488	0.0491	1.96	0.0408		0.086	U	30
160-43084-22	SAMP	FSS-038-081321	Soil	Th-232	pCi/g	0.346	0.214	0.216	1.96	0.0886		0.208		30
160-43084-23	SAMP	FSS-039-081321	Soil	Cs-137	pCi/g	-0.00526	0.0543	0.0543	1.96	0.0453	U	0.0969	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Co-60	pCi/g	-0.0301	0.0786	0.0787	1.96	0.0385	U	0.0865	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	K-40	pCi/g	3.11	0.709	0.775	1.96	0.234		0.563		30
160-43084-23	SAMP	FSS-039-081321	Soil	Na-22	pCi/g	0.0156	0.0344	0.0344	1.96	0.0263	U	0.0617	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Zn-65	pCi/g	0.00	0.0286	0.0286	1.96	0.0821	U	0.180	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Ra-226	pCi/g	0.23	0.0909	0.0939	1.96	0.0384		0.088		30
160-43084-23	SAMP	FSS-039-081321	Soil	Ac-228	pCi/g	0.284	0.0983	0.102	1.96	0.0207		0.0654		30
160-43084-23	SAMP	FSS-039-081321	Soil	Eu-155	pCi/g	0.0385	0.0921	0.0922	1.96	0.0751	U	0.159	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Am-241	pCi/g	0.0425	0.0997	0.0998	1.96	0.0818	U	0.171	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Eu-152	pCi/g	0.08	0.116	0.117	1.96	0.0484		0.103	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Bi-214	pCi/g	0.23	0.0909	0.0939	1.96	0.0384		0.088		30
160-43084-23	SAMP	FSS-039-081321	Soil	Bi-212	pCi/g	-0.226	0.562	0.563	1.96	0.453	U	0.985	U	30
160-43084-23	SAMP	FSS-039-081321	Soil	Pb-214	pCi/g	0.181	0.0732	0.0754	1.96	0.0310		0.0712		30
160-43084-23	SAMP	FSS-039-081321	Soil	Pb-212	pCi/g	0.239	0.0509	0.0592	1.96	0.0192		0.0445		30
160-43084-23	SAMP	FSS-039-081321	Soil	Eu-154	pCi/g	0.097	0.0475	0.0486	1.96	0.0361		0.0768		30
160-43084-23	SAMP	FSS-039-081321	Soil	Th-232	pCi/g	0.284	0.0983	0.102	1.96	0.0207		0.0654		30
160-43084-24	SAMP	FSS-040-081321	Soil	Cs-137	pCi/g	-0.0124	0.038	0.0381	1.96	0.0307	U	0.0678	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Co-60	pCi/g	-0.00795	0.0537	0.0537	1.96	0.0267	U	0.0627	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	K-40	pCi/g	3.71	0.70	0.793	1.96	0.0800		0.253		30
160-43084-24	SAMP	FSS-040-081321	Soil	Na-22	pCi/g	0.00877	0.0337	0.0337	1.96	0.0269	U	0.0627	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Zn-65	pCi/g	0.0394	0.0769	0.077	1.96	0.0596	U	0.135	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Ra-226	pCi/g	0.0659	0.0773	0.0776	1.96	0.102	U	0.215	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Ac-228	pCi/g	0.308	0.0812	0.0868	1.96	0.0453		0.114		30
160-43084-24	SAMP	FSS-040-081321	Soil	Eu-155	pCi/g	0.0149	0.0767	0.0767	1.96	0.149	U	0.307	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Am-241	pCi/g	0.0428	0.0942	0.0943	1.96	0.0771	U	0.162	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Eu-152	pCi/g	0.0405	0.0397	0.0399	1.96	0.0619	U	0.130	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Bi-214	pCi/g	0.0659	0.0773	0.0776	1.96	0.102	U	0.215	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Bi-212	pCi/g	0.159	0.395	0.395	1.96	0.3131	U	0.702	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Pb-214	pCi/g	0.204	0.0589	0.0625	1.96	0.0371		0.0832		30
160-43084-24	SAMP	FSS-040-081321	Soil	Pb-212	pCi/g	0.228	0.051	0.0586	1.96	0.0219		0.0497		30
160-43084-24	SAMP	FSS-040-081321	Soil	Eu-154	pCi/g	-0.000624	0.00132	0.00132	1.96	0.0444	U	0.0934	U	30
160-43084-24	SAMP	FSS-040-081321	Soil	Th-232	pCi/g	0.308	0.0812	0.0868	1.96	0.0453		0.114		30
160-43084-25	SAMP	FSS-041-081321	Soil	Cs-137	pCi/g	0.015	0.0614	0.0614	1.96	0.0504	U	0.109	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Co-60	pCi/g	0.0359	0.0179	0.0182	1.96	0.0112		0.0354		30
160-43084-25	SAMP	FSS-041-081321	Soil	K-40	pCi/g	1.33	0.566	0.581	1.96	0.214		0.561		30
160-43084-25	SAMP	FSS-041-081321	Soil	Na-22	pCi/g	-0.0154	0.0384	0.0384	1.96	0.0291	U	0.0707	U	30

160-43084-25	SAMP	FSS-041-081321	Soil	Zn-65	pCi/g	-0.0212	0.108	0.108	1.96	0.0894	U	0.201	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Ra-226	pCi/g	0.0999	0.0607	0.0616	1.96	0.132	U	0.278	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Ac-228	pCi/g	0.0985	0.18	0.18	1.96	0.0920		0.216	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Eu-155	pCi/g	-0.000498	0.229	0.229	1.96	0.182	U	0.373	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Am-241	pCi/g	-0.0646	0.114	0.114	1.96	0.0934	U	0.195	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Eu-152	pCi/g	0.258	0.113	0.116	1.96	0.0477		0.102		30
160-43084-25	SAMP	FSS-041-081321	Soil	Bi-214	pCi/g	0.0999	0.0607	0.0616	1.96	0.132	U	0.278	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Bi-212	pCi/g	-0.343	0.685	0.686	1.96	0.545	U	1.19	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Pb-214	pCi/g	0.0155	0.0382	0.0382	1.96	0.118	U	0.246	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Pb-212	pCi/g	0.0227	0.0811	0.0812	1.96	0.0669	U	0.14	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Eu-154	pCi/g	0.0327	0.0242	0.0245	1.96	0.0382	U	0.081	U	30
160-43084-25	SAMP	FSS-041-081321	Soil	Th-232	pCi/g	0.0985	0.18	0.18	1.96	0.0920		0.216	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Cs-137	pCi/g	0.0631	0.035	0.0356	1.96	0.0214		0.0492		30
160-43084-26	SAMP	FSS-042-081321	Soil	Co-60	pCi/g	-0.0281	0.0695	0.0695	1.96	0.0338	U	0.0771	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	K-40	pCi/g	2.09	0.735	0.764	1.96	0.312		0.720		30
160-43084-26	SAMP	FSS-042-081321	Soil	Na-22	pCi/g	-0.0272	0.0431	0.0432	1.96	0.0326	U	0.0745	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Zn-65	pCi/g	0.00	0.041	0.041	1.96	0.0735	U	0.163	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Ra-226	pCi/g	0.184	0.0838	0.0858	1.96	0.0389		0.0891		30
160-43084-26	SAMP	FSS-042-081321	Soil	Ac-228	pCi/g	0.0737	0.11	0.11	1.96	0.0662		0.157	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Eu-155	pCi/g	-0.062	0.0823	0.0826	1.96	0.180	U	0.368	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Am-241	pCi/g	0.0331	0.07	0.0701	1.96	0.0565	U	0.121	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Eu-152	pCi/g	0.0322	0.0464	0.0465	1.96	0.0524	U	0.111	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Bi-214	pCi/g	0.184	0.0838	0.0858	1.96	0.0389		0.0891		30
160-43084-26	SAMP	FSS-042-081321	Soil	Bi-212	pCi/g	-0.208	0.453	0.454	1.96	0.359	U	0.796	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Pb-214	pCi/g	0.184	0.0696	0.0721	1.96	0.0305		0.0703		30
160-43084-26	SAMP	FSS-042-081321	Soil	Pb-212	pCi/g	0.131	0.043	0.0461	1.96	0.0222		0.0505		30
160-43084-26	SAMP	FSS-042-081321	Soil	Eu-154	pCi/g	0.0366	0.0695	0.0696	1.96	0.0365		0.0776	U	30
160-43084-26	SAMP	FSS-042-081321	Soil	Th-232	pCi/g	0.0737	0.11	0.11	1.96	0.0662		0.157	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Cs-137	pCi/g	0.012	0.0223	0.0223	1.96	0.0167	U	0.0394	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Co-60	pCi/g	0.00	0.00894	0.00894	1.96	0.0075	U	0.0238	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	K-40	pCi/g	1.79	0.605	0.631	1.96	0.186		0.459		30
160-43084-27	SAMP	FSS-043-081321	Soil	Na-22	pCi/g	0.0187	0.0149	0.0151	1.96	0.0073		0.0229	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Zn-65	pCi/g	-0.0613	0.111	0.111	1.96	0.0883	U	0.192	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Ra-226	pCi/g	0.0507	0.0639	0.0642	1.96	0.0642	U	0.139	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Ac-228	pCi/g	0.144	0.0973	0.0984	1.96	0.0429		0.108		30
160-43084-27	SAMP	FSS-043-081321	Soil	Eu-155	pCi/g	-0.0278	0.16	0.16	1.96	0.134	U	0.276	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Am-241	pCi/g	-0.0518	0.114	0.114	1.96	0.0936	U	0.194	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Eu-152	pCi/g	0.0415	0.0508	0.051	1.96	0.0561	U	0.118	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Bi-214	pCi/g	0.0507	0.0639	0.0642	1.96	0.0642	U	0.139	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Bi-212	pCi/g	0.209	0.416	0.416	1.96	0.327	U	0.727	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Pb-214	pCi/g	0.178	0.0566	0.0595	1.96	0.0236		0.0557		30
160-43084-27	SAMP	FSS-043-081321	Soil	Pb-212	pCi/g	0.175	0.0454	0.0505	1.96	0.0216		0.0487		30
160-43084-27	SAMP	FSS-043-081321	Soil	Eu-154	pCi/g	0.0457	0.0584	0.0586	1.96	0.0292		0.0627	U	30
160-43084-27	SAMP	FSS-043-081321	Soil	Th-232	pCi/g	0.144	0.0973	0.0984	1.96	0.0429		0.108		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Cs-137	pCi/g	-0.03029	0.0466	0.0467	1.96	0.0367	U	0.0796	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Co-60	pCi/g	0.001125	0.0371	0.0371	1.96	0.0187	U	0.0466	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	K-40	pCi/g	1.867	0.569	0.599	1.96	0.227		0.547		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Na-22	pCi/g	0.00	0.00639	0.00639	1.96	0.0076	U	0.024	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Zn-65	pCi/g	0.00	0.0227	0.0227	1.96	0.0786	U	0.173	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Ra-226	pCi/g	0.1475	0.0737	0.0752	1.96	0.0385		0.0878		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Ac-228	pCi/g	0.2036	0.0979	0.10	1.96	0.0449		0.113		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Eu-155	pCi/g	-0.000782	0.0973	0.0973	1.96	0.134	U	0.276	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Am-241	pCi/g	0.002567	0.083	0.083	1.96	0.0526	U	0.113	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Eu-152	pCi/g	0.001825	0.0028	0.0028	1.96	0.0603	U	0.127	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Bi-214	pCi/g	0.1475	0.0737	0.0752	1.96	0.0385		0.0878		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Bi-212	pCi/g	0.2685	0.509	0.51	1.96	0.403	U	0.882	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Pb-214	pCi/g	0.1343	0.0472	0.0491	1.96	0.0390		0.0869		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Pb-212	pCi/g	0.1491	0.0527	0.056	1.96	0.0261		0.0581		30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Eu-154	pCi/g	0.01822	0.104	0.104	1.96	0.0433	U	0.091	U	30
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Th-232	pCi/g	0.2036	0.0979	0.1	1.96	0.0449		0.113		30
160-43084-3	SAMP	FSS-019-081221	Soil	Cs-137	pCi/g	0.0942	0.0326	0.034	1.96	0.0069		0.0217		30
160-43084-3	SAMP	FSS-019-081221	Soil	Co-60	pCi/g	-0.0314	0.085	0.085	1.96	0.0391	U	0.0909	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	K-40	pCi/g	4.15	0.912	1.00	1.96	0.210		0.551		30

160-43084-3	SAMP	FSS-019-081221	Soil	Na-22	pCi/g	0.0121	0.0347	0.0347	1.96	0.0265	U	0.0653	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Zn-65	pCi/g	-0.0208	0.107	0.107	1.96	0.112	U	0.245	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Ra-226	pCi/g	0.261	0.0799	0.0842	1.96	0.0262		0.0661		30
160-43084-3	SAMP	FSS-019-081221	Soil	Ac-228	pCi/g	0.234	0.215	0.216	1.96	0.111		0.252	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Eu-155	pCi/g	-0.000489	0.142	0.142	1.96	0.261	U	0.53	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Am-241	pCi/g	0.0717	0.111	0.112	1.96	0.0906	U	0.189	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Eu-152	pCi/g	0.27	0.128	0.131	1.96	0.176		0.367	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Bi-214	pCi/g	0.261	0.0799	0.0842	1.96	0.0262		0.0661		30
160-43084-3	SAMP	FSS-019-081221	Soil	Bi-212	pCi/g	0.00	0.332	0.332	1.96	0.4533	U	1.00	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Pb-214	pCi/g	0.0638	0.152	0.153	1.96	0.135	U	0.281	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Pb-212	pCi/g	0.28	0.0811	0.0885	1.96	0.0528		0.112		30
160-43084-3	SAMP	FSS-019-081221	Soil	Eu-154	pCi/g	0.0364	0.051	0.0511	1.96	0.0447	U	0.0938	U	30
160-43084-3	SAMP	FSS-019-081221	Soil	Th-232	pCi/g	0.234	0.215	0.216	1.96	0.111		0.252	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Cs-137	pCi/g	0.029	0.0528	0.0528	1.96	0.0279		0.0633	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Co-60	pCi/g	0.00645	0.00614	0.00618	1.96	0.0225	U	0.0559	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	K-40	pCi/g	1.59	0.767	0.783	1.96	0.359		0.829		30
160-43084-4	SAMP	FSS-020-081221	Soil	Na-22	pCi/g	0.00912	0.0283	0.0283	1.96	0.0217	U	0.054	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Zn-65	pCi/g	0.00	0.0136	0.0136	1.96	0.0872	U	0.193	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Ra-226	pCi/g	0.233	0.103	0.106	1.96	0.0492		0.111		30
160-43084-4	SAMP	FSS-020-081221	Soil	Ac-228	pCi/g	0.334	0.107	0.112	1.96	0.108		0.244		30
160-43084-4	SAMP	FSS-020-081221	Soil	Eu-155	pCi/g	0.045	0.0936	0.0938	1.96	0.110	U	0.229	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Am-241	pCi/g	0.00308	0.117	0.117	1.96	0.0981	U	0.205	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Eu-152	pCi/g	0.0581	0.105	0.105	1.96	0.0523		0.112	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Bi-214	pCi/g	0.233	0.103	0.106	1.96	0.0492		0.111		30
160-43084-4	SAMP	FSS-020-081221	Soil	Bi-212	pCi/g	0.0167	0.538	0.538	1.96	0.451	U	0.992	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Pb-214	pCi/g	0.279	0.0746	0.0799	1.96	0.0351		0.081		30
160-43084-4	SAMP	FSS-020-081221	Soil	Pb-212	pCi/g	0.329	0.0686	0.0803	1.96	0.0312		0.0696		30
160-43084-4	SAMP	FSS-020-081221	Soil	Eu-154	pCi/g	0.00243	0.00359	0.0036	1.96	0.0470	U	0.0994	U	30
160-43084-4	SAMP	FSS-020-081221	Soil	Th-232	pCi/g	0.334	0.107	0.112	1.96	0.108		0.244		30
160-43084-5	SAMP	FSS-021-081221	Soil	Cs-137	pCi/g	0.0226	0.0403	0.0404	1.96	0.0317	U	0.0698	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Co-60	pCi/g	-0.0316	0.0696	0.0697	1.96	0.0337	U	0.0769	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	K-40	pCi/g	1.73	0.485	0.516	1.96	0.0824		0.261		30
160-43084-5	SAMP	FSS-021-081221	Soil	Na-22	pCi/g	-0.0079	0.0332	0.0332	1.96	0.0266	U	0.0623	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Zn-65	pCi/g	0.0405	0.0807	0.0808	1.96	0.0628	U	0.142	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Ra-226	pCi/g	0.181	0.0766	0.0788	1.96	0.0386		0.0885		30
160-43084-5	SAMP	FSS-021-081221	Soil	Ac-228	pCi/g	0.242	0.0913	0.0944	1.96	0.0209		0.0661		30
160-43084-5	SAMP	FSS-021-081221	Soil	Eu-155	pCi/g	0.00	0.0592	0.0592	1.96	0.180	U	0.369	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Am-241	pCi/g	0.0405	0.0892	0.0893	1.96	0.0729	U	0.153	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Eu-152	pCi/g	0.0512	0.0861	0.0863	1.96	0.0585	U	0.124	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Bi-214	pCi/g	0.181	0.0766	0.0788	1.96	0.0386		0.0885		30
160-43084-5	SAMP	FSS-021-081221	Soil	Bi-212	pCi/g	0.283	0.434	0.435	1.96	0.333	U	0.745	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Pb-214	pCi/g	0.228	0.0628	0.067	1.96	0.0335		0.0763		30
160-43084-5	SAMP	FSS-021-081221	Soil	Pb-212	pCi/g	0.238	0.053	0.061	1.96	0.0228		0.0518		30
160-43084-5	SAMP	FSS-021-081221	Soil	Eu-154	pCi/g	0.0571	0.0856	0.0858	1.96	0.0431		0.0907	U	30
160-43084-5	SAMP	FSS-021-081221	Soil	Th-232	pCi/g	0.242	0.0913	0.0944	1.96	0.0209		0.0661		30
160-43084-6	SAMP	FSS-022-081221	Soil	Cs-137	pCi/g	-0.00133	0.0824	0.0824	1.96	0.0522	U	0.113	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Co-60	pCi/g	0.0107	0.068	0.068	1.96	0.0348	U	0.082	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	K-40	pCi/g	1.35	0.768	0.78	1.96	0.384		0.892		30
160-43084-6	SAMP	FSS-022-081221	Soil	Na-22	pCi/g	0.0398	0.026	0.0263	1.96	0.0103		0.0326		30
160-43084-6	SAMP	FSS-022-081221	Soil	Zn-65	pCi/g	0.0429	0.0985	0.0986	1.96	0.0769	U	0.175	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Ra-226	pCi/g	0.036	0.129	0.129	1.96	0.119	U	0.253	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Ac-228	pCi/g	0.459	0.144	0.151	1.96	0.0274		0.0868		30
160-43084-6	SAMP	FSS-022-081221	Soil	Eu-155	pCi/g	0.06	0.178	0.178	1.96	0.147	U	0.305	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Am-241	pCi/g	0.032	0.133	0.134	1.96	0.111	U	0.231	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Eu-152	pCi/g	0.0767	0.128	0.129	1.96	0.0640		0.137	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Bi-214	pCi/g	0.036	0.129	0.129	1.96	0.119	U	0.253	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Bi-212	pCi/g	0.102	0.827	0.827	1.96	0.687	U	1.48	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Pb-214	pCi/g	0.359	0.0925	0.0995	1.96	0.0350		0.0822		30
160-43084-6	SAMP	FSS-022-081221	Soil	Pb-212	pCi/g	0.294	0.083	0.091	1.96	0.0494		0.107		30
160-43084-6	SAMP	FSS-022-081221	Soil	Eu-154	pCi/g	0.0419	0.0733	0.0734	1.96	0.0429	U	0.0918	U	30
160-43084-6	SAMP	FSS-022-081221	Soil	Th-232	pCi/g	0.459	0.144	0.151	1.96	0.0274		0.0868		30
160-43084-7	SAMP	FSS-023-081221	Soil	Cs-137	pCi/g	0.0112	0.0537	0.0537	1.96	0.0442	U	0.0959	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Co-60	pCi/g	0.00313	0.0192	0.0192	1.96	0.0262	U	0.0645	U	30

160-43084-7	SAMP	FSS-023-081221	Soil	K-40	pCi/g	2.03	0.644	0.675	1.96	0.200		0.523		30
160-43084-7	SAMP	FSS-023-081221	Soil	Na-22	pCi/g	-0.0429	0.0583	0.0585	1.96	0.0436	U	0.0988	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Zn-65	pCi/g	0.0028	0.0998	0.0998	1.96	0.0833	U	0.187	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Ra-226	pCi/g	0.0807	0.171	0.172	1.96	0.136	U	0.284	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Ac-228	pCi/g	0.178	0.123	0.125	1.96	0.0606		0.151		30
160-43084-7	SAMP	FSS-023-081221	Soil	Eu-155	pCi/g	-0.000464	0.121	0.121	1.96	0.232	U	0.472	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Am-241	pCi/g	0.0544	0.092	0.0922	1.96	0.0748	U	0.157	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Eu-152	pCi/g	0.0294	0.0381	0.0383	1.96	0.0610	U	0.128	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Bi-214	pCi/g	0.0807	0.171	0.172	1.96	0.136	U	0.284	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Bi-212	pCi/g	0.00322	0.619	0.619	1.96	0.520	U	1.13	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Pb-214	pCi/g	0.023	0.0502	0.0502	1.96	0.0389	U	0.0877	U	30
160-43084-7	SAMP	FSS-023-081221	Soil	Pb-212	pCi/g	0.25	0.0752	0.0816	1.96	0.0346		0.0754		30
160-43084-7	SAMP	FSS-023-081221	Soil	Eu-154	pCi/g	0.109	0.059	0.0601	1.96	0.0433		0.0908		30
160-43084-7	SAMP	FSS-023-081221	Soil	Th-232	pCi/g	0.178	0.123	0.125	1.96	0.0606		0.151		30
160-43084-8	SAMP	FSS-024-081221	Soil	Cs-137	pCi/g	0.00247	0.0467	0.0467	1.96	0.0390	U	0.0847	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Co-60	pCi/g	0.00121	0.0399	0.0399	1.96	0.0201	U	0.0501	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	K-40	pCi/g	2.34	0.648	0.689	1.96	0.244		0.588		30
160-43084-8	SAMP	FSS-024-081221	Soil	Na-22	pCi/g	-0.0547	0.0583	0.0586	1.96	0.0434	U	0.0963	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Zn-65	pCi/g	0.00	0.0172	0.0172	1.96	0.0893	U	0.195	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Ra-226	pCi/g	0.0213	0.04	0.0401	1.96	0.0975	U	0.207	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Ac-228	pCi/g	0.25	0.158	0.159	1.96	0.0682		0.162		30
160-43084-8	SAMP	FSS-024-081221	Soil	Eu-155	pCi/g	0.0598	0.209	0.21	1.96	0.174	U	0.358	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Am-241	pCi/g	-0.053	0.0519	0.0522	1.96	0.0974	U	0.203	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Eu-152	pCi/g	0.0489	0.0882	0.0883	1.96	0.0487		0.104	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Bi-214	pCi/g	0.0213	0.04	0.0401	1.96	0.0975	U	0.207	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Bi-212	pCi/g	-0.321	0.569	0.57	1.96	0.4503	U	0.982	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Pb-214	pCi/g	0.237	0.0625	0.067	1.96	0.0272		0.064		30
160-43084-8	SAMP	FSS-024-081221	Soil	Pb-212	pCi/g	0.227	0.055	0.0621	1.96	0.0262		0.0588		30
160-43084-8	SAMP	FSS-024-081221	Soil	Eu-154	pCi/g	0.051	0.0834	0.0836	1.96	0.0369		0.0786	U	30
160-43084-8	SAMP	FSS-024-081221	Soil	Th-232	pCi/g	0.25	0.158	0.159	1.96	0.0682		0.162		30
160-43084-9	SAMP	FSS-025-081221	Soil	Cs-137	pCi/g	0.0188	0.0346	0.0347	1.96	0.0179		0.0425	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Co-60	pCi/g	0.0226	0.0429	0.0429	1.96	0.0198		0.0493	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	K-40	pCi/g	3.17	0.663	0.735	1.96	0.0840		0.266		30
160-43084-9	SAMP	FSS-025-081221	Soil	Na-22	pCi/g	0.0345	0.0214	0.0216	1.96	0.0080		0.0254		30
160-43084-9	SAMP	FSS-025-081221	Soil	Zn-65	pCi/g	-0.0173	0.104	0.104	1.96	0.0855	U	0.188	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Ra-226	pCi/g	0.316	0.0891	0.0948	1.96	0.0372		0.0859		30
160-43084-9	SAMP	FSS-025-081221	Soil	Ac-228	pCi/g	0.405	0.127	0.134	1.96	0.0673		0.159		30
160-43084-9	SAMP	FSS-025-081221	Soil	Eu-155	pCi/g	-0.0771	0.222	0.222	1.96	0.185	U	0.379	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Am-241	pCi/g	-0.0288	0.133	0.133	1.96	0.111	U	0.229	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Eu-152	pCi/g	0.0718	0.113	0.113	1.96	0.0592		0.125	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Bi-214	pCi/g	0.316	0.0891	0.0948	1.96	0.0372		0.0859		30
160-43084-9	SAMP	FSS-025-081221	Soil	Bi-212	pCi/g	0.206	0.52	0.521	1.96	0.418	U	0.916	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Pb-214	pCi/g	0.305	0.0844	0.09	1.96	0.0346		0.0786		30
160-43084-9	SAMP	FSS-025-081221	Soil	Pb-212	pCi/g	0.541	0.0763	0.103	1.96	0.0271		0.0604		30
160-43084-9	SAMP	FSS-025-081221	Soil	Eu-154	pCi/g	0.0301	0.0299	0.03	1.96	0.0526	U	0.110	U	30
160-43084-9	SAMP	FSS-025-081221	Soil	Th-232	pCi/g	0.405	0.127	0.134	1.96	0.0673		0.159		30
LCS 160-523276/2-A	QC_LCS	LCS 160-523276/2-A	Soil	Cs-137	pCi/g	25.06	0.628	2.63	1.96	0.105		0.22		30
LCS 160-523276/2-A	QC_LCS	LCS 160-523276/2-A	Soil	Co-60	pCi/g	8.355	0.298	0.875	1.96	0.0356		0.0863		30
LCS 160-523276/2-A	QC_LCS	LCS 160-523276/2-A	Soil	Am-241	pCi/g	94.1	1.78	9.74	1.96	0.658		1.32		30
LCS 160-523294/2-A	QC_LCS	LCS 160-523294/2-A	Soil	Cs-137	pCi/g	25.09	0.532	2.61	1.96	0.0735		0.154		30
LCS 160-523294/2-A	QC_LCS	LCS 160-523294/2-A	Soil	Co-60	pCi/g	7.98	0.254	0.825	1.96	0.0331		0.0771		30
LCS 160-523294/2-A	QC_LCS	LCS 160-523294/2-A	Soil	Am-241	pCi/g	96.59	1.43	9.93	1.96	0.503		1.02		30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Cs-137	pCi/g	-0.02898	0.0488	0.0488	1.96	0.0376	U	0.0843	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Co-60	pCi/g	0.00	0.00963	0.00963	1.96	0.0114	U	0.0362	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	K-40	pCi/g	-0.0599	0.697	0.697	1.96	0.435	U	1.01	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Na-22	pCi/g	-0.007901	0.0335	0.0335	1.96	0.0263	U	0.0654	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Zn-65	pCi/g	0.00	0.0572	0.0572	1.96	0.0760	U	0.175	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Ra-226	pCi/g	-0.01755	0.135	0.135	1.96	0.114	U	0.244	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Ac-228	pCi/g	0.03762	0.176	0.176	1.96	0.0924	U	0.219	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Eu-155	pCi/g	0.01703	0.0584	0.0585	1.96	0.125	U	0.262	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Am-241	pCi/g	0.03227	0.0744	0.0745	1.96	0.0596	U	0.130	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Eu-152	pCi/g	0.08798	0.0545	0.0553	1.96	0.0660		0.141	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Bi-214	pCi/g	-0.01755	0.135	0.135	1.96	0.114	U	0.244	U	30

MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Bi-212	pCi/g	0.04052	0.64	0.64	1.96	0.534	U	1.18	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Pb-214	pCi/g	0.02415	0.0924	0.0924	1.96	0.0595	U	0.132	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Pb-212	pCi/g	-0.03957	0.0979	0.098	1.96	0.0802	U	0.169	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Eu-154	pCi/g	0.01751	0.0599	0.0599	1.96	0.0492	U	0.105	U	30
MB 160-523276/1-A	QC_BLK	MB 160-523276/1-A	Soil	Th-232	pCi/g	0.03762	0.176	0.176	1.96	0.0924	U	0.219	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Cs-137	pCi/g	-0.00811	0.0636	0.0636	1.96	0.0526	U	0.116	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Co-60	pCi/g	-0.002162	0.0798	0.0798	1.96	0.0380	U	0.0937	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	K-40	pCi/g	0.2954	0.45	0.451	1.96	0.290		0.758	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Na-22	pCi/g	0.00	0.0173	0.0173	1.96	0.0145	U	0.0459	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Zn-65	pCi/g	-0.02862	0.078	0.078	1.96	0.0866	U	0.203	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Ra-226	pCi/g	0.04868	0.045	0.0453	1.96	0.110	U	0.239	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Ac-228	pCi/g	0.00	0.0311	0.0311	1.96	0.0369	U	0.117	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Eu-155	pCi/g	0.02217	0.0657	0.0658	1.96	0.133	U	0.279	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Am-241	pCi/g	0.03722	0.0676	0.0677	1.96	0.0532	U	0.117	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Eu-152	pCi/g	0.08043	0.0501	0.0507	1.96	0.0327		0.0741		30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Bi-214	pCi/g	0.04868	0.045	0.0453	1.96	0.110	U	0.239	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Bi-212	pCi/g	-0.3273	0.654	0.654	1.96	0.508	U	1.15	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Pb-214	pCi/g	0.01923	0.05	0.05	1.96	0.125	U	0.265	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Pb-212	pCi/g	0.005607	0.0663	0.0663	1.96	0.0548	U	0.119	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Eu-154	pCi/g	-0.03177	0.0541	0.0542	1.96	0.0433	U	0.0927	U	30
MB 160-523294/1-A	QC_BLK	MB 160-523294/1-A	Soil	Th-232	pCi/g	0.00	0.0311	0.0311	1.96	0.0369	U	0.117	U	30
160-43084-1	SAMP	FSS-017-081221	Soil	Ni-63	pCi/g	-0.0509	0.873	0.873	1.96	0.739	U	1.55	U	60
160-43084-10	SAMP	FSS-026-081221	Soil	Ni-63	pCi/g	0.838	0.808	0.812	1.96	0.662		1.39	U	60
160-43084-11	SAMP	FSS-027-081221	Soil	Ni-63	pCi/g	1.23	0.934	0.942	1.96	0.748		1.57	U	60
160-43084-12	SAMP	FSS-028-081221	Soil	Ni-63	pCi/g	1.64	0.763	0.781	1.96	0.592		1.24		60
160-43084-13	SAMP	FSS-029-081321	Soil	Ni-63	pCi/g	1.48	0.813	0.826	1.96	0.639		1.34		60
160-43084-14	SAMP	FSS-030-081321	Soil	Ni-63	pCi/g	1.13	0.783	0.791	1.96	0.627		1.31	U	60
160-43084-15	SAMP	FSS-031-081321	Soil	Ni-63	pCi/g	1.1	0.803	0.811	1.96	0.644		1.35	U	60
160-43084-16	SAMP	FSS-032-081321	Soil	Ni-63	pCi/g	0.935	0.857	0.862	1.96	0.706		1.48	U	60
160-43084-17	SAMP	FSS-033-081321	Soil	Ni-63	pCi/g	1.7	0.807	0.825	1.96	0.625		1.31		60
160-43084-18	SAMP	FSS-034-081321	Soil	Ni-63	pCi/g	0.989	0.744	0.75	1.96	0.599		1.25	U	60
160-43084-19	SAMP	FSS-035-081321	Soil	Ni-63	pCi/g	1.24	0.811	0.821	1.96	0.647		1.36	U	60
160-43084-2	SAMP	FSS-018-081221	Soil	Ni-63	pCi/g	0.043	0.865	0.865	1.96	0.727	U	1.52	U	60
160-43084-20	SAMP	FSS-036-081321	Soil	Ni-63	pCi/g	0.861	0.83	0.835	1.96	0.678		1.42	U	60
160-43084-21	SAMP	FSS-037-081321	Soil	Ni-63	pCi/g	0.697	0.721	0.725	1.96	0.593		1.24	U	60
160-43084-22	SAMP	FSS-038-081321	Soil	Ni-63	pCi/g	1.42	0.842	0.854	1.96	0.665		1.39		60
160-43084-23	SAMP	FSS-039-081321	Soil	Ni-63	pCi/g	0.821	0.827	0.832	1.96	0.678		1.42	U	60
160-43084-24	SAMP	FSS-040-081321	Soil	Ni-63	pCi/g	1.31	0.803	0.814	1.96	0.640		1.34	U	60
160-43084-25	SAMP	FSS-041-081321	Soil	Ni-63	pCi/g	0.745	0.785	0.788	1.96	0.645		1.35	U	60
160-43084-26	SAMP	FSS-042-081321	Soil	Ni-63	pCi/g	0.998	0.959	0.964	1.96	0.774		1.62	U	60
160-43084-27	SAMP	FSS-043-081321	Soil	Ni-63	pCi/g	0.785	0.886	0.89	1.96	0.725		1.51	U	60
160-43084-3	SAMP	FSS-019-081221	Soil	Ni-63	pCi/g	0.00705	0.934	0.934	1.96	0.778	U	1.63	U	60
160-43084-4	SAMP	FSS-020-081221	Soil	Ni-63	pCi/g	0.262	0.863	0.863	1.96	0.717	U	1.50	U	60
160-43084-5	SAMP	FSS-021-081221	Soil	Ni-63	pCi/g	0.953	0.998	1.00	1.96	0.804		1.68	U	60
160-43084-6	SAMP	FSS-022-081221	Soil	Ni-63	pCi/g	0.649	0.936	0.938	1.96	0.778	U	1.63	U	60
160-43084-7	SAMP	FSS-023-081221	Soil	Ni-63	pCi/g	1.07	0.811	0.818	1.96	0.651		1.36	U	60
160-43084-8	SAMP	FSS-024-081221	Soil	Ni-63	pCi/g	0.726	0.833	0.836	1.96	0.694		1.45	U	60
160-43084-9	SAMP	FSS-025-081221	Soil	Ni-63	pCi/g	1.14	0.859	0.867	1.96	0.699		1.46	U	60
160-43084-9 DU	QC_DUP	160-43084-9 DU	Soil	Ni-63	pCi/g	0.3762	0.688	0.689	1.96	0.576	U	1.21	U	60
LCS 160-524237/2-A	QC_LCS	LCS 160-524237/2-A	Soil	Ni-63	pCi/g	19.63	1.65	2.59	1.96	0.801		1.67		60
LCS 160-524260/2-A	QC_LCS	LCS 160-524260/2-A	Soil	Ni-63	pCi/g	19.87	1.47	2.5	1.96	0.662		1.39		60
LCS 160-526025/2-A	QC_LCS	LCS 160-526025/2-A	Soil	Ni-63	pCi/g	18.81	1.46	2.41	1.96	0.694		1.45		60
MB 160-524237/1-A	QC_BLK	MB 160-524237/1-A	Soil	Ni-63	pCi/g	-0.5258	1.24	1.24	1.96	1.06	U	2.21	U	60
MB 160-524260/1-A	QC_BLK	MB 160-524260/1-A	Soil	Ni-63	pCi/g	1.078	0.944	0.951	1.96	0.775		1.62	U	60
MB 160-526025/1-A	QC_BLK	MB 160-526025/1-A	Soil	Ni-63	pCi/g	1.18	0.883	0.891	1.96	0.707		1.48	U	60
160-43084-1	SAMP	FSS-017-081221	Soil	Pu-241	pCi/g	0.126	1.46	1.46	1.96	1.20	U	2.53	U	60
160-43084-1 DU	QC_DUP	160-43084-1 DU	Soil	Pu-241	pCi/g	-0.3393	1.53	1.53	1.96	1.30	U	2.75	U	60
160-43084-10	SAMP	FSS-026-081221	Soil	Pu-241	pCi/g	-1.44	1.6	1.61	1.96	1.39	U	2.94	U	60
160-43084-11	SAMP	FSS-027-081221	Soil	Pu-241	pCi/g	-0.141	1.69	1.69	1.96	1.42	U	3.00	U	60
160-43084-12	SAMP	FSS-028-081221	Soil	Pu-241	pCi/g	1.72	1.73	1.73	1.96	1.36		2.86	U	60
160-43084-13	SAMP	FSS-029-081321	Soil	Pu-241	pCi/g	-0.897	1.95	1.95	1.96	1.64	U	3.47	U	60
160-43084-14	SAMP	FSS-030-081321	Soil	Pu-241	pCi/g	0.00	2.09	2.09	1.96	1.74	U	3.67	U	60
160-43084-15	SAMP	FSS-031-081321	Soil	Pu-241	pCi/g	0.0796	1.79	1.79	1.96	1.46	U	3.08	U	60

160-43084-16	SAMP	FSS-032-081321	Soil	Pu-241	pCi/g	-0.374	1.64	1.64	1.96	1.36	U	2.86	U	60
160-43084-17	SAMP	FSS-033-081321	Soil	Pu-241	pCi/g	-1.24	1.65	1.65	1.96	1.44	U	3.04	U	60
160-43084-18	SAMP	FSS-034-081321	Soil	Pu-241	pCi/g	0.852	1.52	1.52	1.96	1.23	U	2.60	U	60
160-43084-19	SAMP	FSS-035-081321	Soil	Pu-241	pCi/g	-0.971	1.08	1.09	1.96	0.948	U	1.99	U	60
160-43084-19 DU	QC_DUP	160-43084-19 DU	Soil	Pu-241	pCi/g	-1.349	1.22	1.23	1.96	1.09	U	2.29	U	60
160-43084-2	SAMP	FSS-018-081221	Soil	Pu-241	pCi/g	-0.943	1.35	1.35	1.96	1.18	U	2.48	U	60
160-43084-20	SAMP	FSS-036-081321	Soil	Pu-241	pCi/g	-1.27	1.14	1.15	1.96	1.02	U	2.14	U	60
160-43084-21	SAMP	FSS-037-081321	Soil	Pu-241	pCi/g	-1.51	1.48	1.49	1.96	1.31	U	2.75	U	60
160-43084-22	SAMP	FSS-038-081321	Soil	Pu-241	pCi/g	-0.296	1.41	1.41	1.96	1.21	U	2.55	U	60
160-43084-23	SAMP	FSS-039-081321	Soil	Pu-241	pCi/g	-1.37	1.33	1.34	1.96	1.18	U	2.47	U	60
160-43084-24	SAMP	FSS-040-081321	Soil	Pu-241	pCi/g	-0.839	1.37	1.37	1.96	1.19	U	2.51	U	60
160-43084-25	SAMP	FSS-041-081321	Soil	Pu-241	pCi/g	-1.18	1.44	1.44	1.96	1.25	U	2.63	U	60
160-43084-26	SAMP	FSS-042-081321	Soil	Pu-241	pCi/g	-1.12	1.65	1.66	1.96	1.45	U	3.05	U	60
160-43084-27	SAMP	FSS-043-081321	Soil	Pu-241	pCi/g	1.07	1.39	1.40	1.96	1.15	U	2.41	U	60
160-43084-27 DU	QC_DUP	160-43084-27 DU	Soil	Pu-241	pCi/g	-0.2224	1.29	1.29	1.96	1.13	U	2.37	U	60
160-43084-3	SAMP	FSS-019-081221	Soil	Pu-241	pCi/g	-1.42	1.6	1.61	1.96	1.38	U	2.92	U	60
160-43084-4	SAMP	FSS-020-081221	Soil	Pu-241	pCi/g	-1.32	1.62	1.62	1.96	1.40	U	2.94	U	60
160-43084-5	SAMP	FSS-021-081221	Soil	Pu-241	pCi/g	-0.514	1.64	1.64	1.96	1.39	U	2.92	U	60
160-43084-6	SAMP	FSS-022-081221	Soil	Pu-241	pCi/g	-1.06	1.67	1.67	1.96	1.47	U	3.10	U	60
160-43084-7	SAMP	FSS-023-081221	Soil	Pu-241	pCi/g	-0.575	1.38	1.38	1.96	1.15	U	2.43	U	60
160-43084-8	SAMP	FSS-024-081221	Soil	Pu-241	pCi/g	-0.454	1.98	1.98	1.96	1.73	U	3.64	U	60
160-43084-9	SAMP	FSS-025-081221	Soil	Pu-241	pCi/g	0.537	1.84	1.84	1.96	1.50	U	3.17	U	60
LCS 160-524258/2-A	QC_LCS	LCS 160-524258/2-A	Soil	Pu-241	pCi/g	24.21	2.76	3.49	1.96	1.44		3.03		60
LCS 160-524346/2-A	QC_LCS	LCS 160-524346/2-A	Soil	Pu-241	pCi/g	20.36	2.47	3.05	1.96	1.34		2.82		60
LCS 160-526529/2-A	QC_LCS	LCS 160-526529/2-A	Soil	Pu-241	pCi/g	18.79	2.21	2.76	1.96	1.20		2.51		60
MB 160-524258/1-A	QC_BLK	MB 160-524258/1-A	Soil	Pu-241	pCi/g	0.3883	1.60	1.60	1.96	1.33	U	2.80	U	60
MB 160-524346/1-A	QC_BLK	MB 160-524346/1-A	Soil	Pu-241	pCi/g	-0.7489	1.29	1.29	1.96	1.12	U	2.34	U	60
MB 160-526529/1-A	QC_BLK	MB 160-526529/1-A	Soil	Pu-241	pCi/g	-0.1322	1.06	1.06	1.96	0.896	U	1.88	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43113-1	SAMP	FSS-044-081721	Soil	Sr-90	pCi/g	0.232	0.183	0.184	1.96	0.135		0.295	U	200
160-43113-10	SAMP	FSS-053-081721	Soil	Sr-90	pCi/g	0.116	0.218	0.218	1.96	0.175	U	0.378	U	200
160-43113-11	SAMP	FSS-054-081721	Soil	Sr-90	pCi/g	0.127	0.222	0.222	1.96	0.177	U	0.384	U	200
160-43113-12	SAMP	FSS-055-081721	Soil	Sr-90	pCi/g	0.565	0.369	0.371	1.96	0.264		0.579	U	200
160-43113-13	SAMP	FSS-056-081721	Soil	Sr-90	pCi/g	0.0382	0.166	0.166	1.96	0.136	U	0.299	U	200
160-43113-14	SAMP	FSS-256-081721	Soil	Sr-90	pCi/g	0.189	0.206	0.206	1.96	0.160		0.345	U	200
160-43113-15	SAMP	FSS-057-081721	Soil	Sr-90	pCi/g	0.36	0.214	0.216	1.96	0.153		0.333		200
160-43113-16	SAMP	FSS-257-081721	Soil	Sr-90	pCi/g	0.100	0.198	0.198	1.96	0.159	U	0.343	U	200
160-43113-17	SAMP	FSS-058-081721	Soil	Sr-90	pCi/g	0.206	0.198	0.198	1.96	0.149		0.327	U	200
160-43113-18	SAMP	FSS-258-081721	Soil	Sr-90	pCi/g	0.555	0.245	0.249	1.96	0.165		0.361		200
160-43113-2	SAMP	FSS-045-081721	Soil	Sr-90	pCi/g	0.0262	0.189	0.189	1.96	0.156	U	0.341	U	200
160-43113-3	SAMP	FSS-046-081721	Soil	Sr-90	pCi/g	0.291	0.220	0.221	1.96	0.162		0.353	U	200
160-43113-4	SAMP	FSS-047-081721	Soil	Sr-90	pCi/g	0.161	0.186	0.187	1.96	0.144		0.314	U	200
160-43113-5	SAMP	FSS-048-081721	Soil	Sr-90	pCi/g	0.159	0.203	0.204	1.96	0.157		0.345	U	200
160-43113-6	SAMP	FSS-049-081721	Soil	Sr-90	pCi/g	0.0702	0.232	0.232	1.96	0.189	U	0.410	U	200
160-43113-7	SAMP	FSS-050-081721	Soil	Sr-90	pCi/g	-0.179	0.18	0.181	1.96	0.166	U	0.363	U	200
160-43113-8	SAMP	FSS-051-081721	Soil	Sr-90	pCi/g	0.0756	0.186	0.187	1.96	0.151	U	0.328	U	200
160-43113-9	SAMP	FSS-052-081721	Soil	Sr-90	pCi/g	0.0992	0.203	0.203	1.96	0.162	U	0.354	U	200
LCS 160-525601/2-A	QC_LCS	LCS 160-525601/2-A	Soil	Sr-90	pCi/g	7.387	0.508	0.781	1.96	0.130		0.284		200
MB 160-525601/1-A	QC_BLK	MB 160-525601/1-A	Soil	Sr-90	pCi/g	0.03829	0.174	0.174	1.96	0.143	U	0.312	U	200
160-43113-1	SAMP	FSS-044-081721	Soil	H-3	pCi/g	-0.033	0.221	0.221	1.96	0.187	U	0.407	U	20
160-43113-10	SAMP	FSS-053-081721	Soil	H-3	pCi/g	0.00906	0.216	0.216	1.96	0.177	U	0.387	U	20
160-43113-11	SAMP	FSS-054-081721	Soil	H-3	pCi/g	0.161	0.253	0.253	1.96	0.199	U	0.435	U	20
160-43113-12	SAMP	FSS-055-081721	Soil	H-3	pCi/g	0.178	0.242	0.243	1.96	0.189	U	0.412	U	20
160-43113-13	SAMP	FSS-056-081721	Soil	H-3	pCi/g	0.0393	0.232	0.232	1.96	0.189	U	0.413	U	20
160-43113-14	SAMP	FSS-256-081721	Soil	H-3	pCi/g	0.170	0.250	0.250	1.96	0.194	U	0.424	U	20
160-43113-15	SAMP	FSS-057-081721	Soil	H-3	pCi/g	0.0449	0.226	0.226	1.96	0.183	U	0.398	U	20
160-43113-16	SAMP	FSS-257-081721	Soil	H-3	pCi/g	0.0564	0.219	0.220	1.96	0.176	U	0.383	U	20
160-43113-17	SAMP	FSS-058-081721	Soil	H-3	pCi/g	0.124	0.234	0.234	1.96	0.184	U	0.401	U	20
160-43113-17 MS	QC_MS	160-43113-17 MS	Soil	H-3	pCi/g	7.081	0.579	0.841	1.96	0.178		0.387		20
160-43113-18	SAMP	FSS-258-081721	Soil	H-3	pCi/g	0.186	0.259	0.259	1.96	0.199	U	0.434	U	20
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	H-3	pCi/g	-0.02388	0.249	0.249	1.96	0.211	U	0.459	U	20
160-43113-2	SAMP	FSS-045-081721	Soil	H-3	pCi/g	0.179	0.251	0.251	1.96	0.196	U	0.428	U	20
160-43113-3	SAMP	FSS-046-081721	Soil	H-3	pCi/g	11.3	0.733	1.22	1.96	0.188		0.409		20
160-43113-4	SAMP	FSS-047-081721	Soil	H-3	pCi/g	-0.0711	0.210	0.211	1.96	0.179	U	0.389	U	20
160-43113-5	SAMP	FSS-048-081721	Soil	H-3	pCi/g	-0.0175	0.222	0.222	1.96	0.188	U	0.409	U	20
160-43113-6	SAMP	FSS-049-081721	Soil	H-3	pCi/g	-0.143	0.213	0.213	1.96	0.189	U	0.411	U	20
160-43113-7	SAMP	FSS-050-081721	Soil	H-3	pCi/g	0.0318	0.218	0.218	1.96	0.177	U	0.385	U	20
160-43113-8	SAMP	FSS-051-081721	Soil	H-3	pCi/g	0.0804	0.235	0.235	1.96	0.190	U	0.415	U	20
160-43113-9	SAMP	FSS-052-081721	Soil	H-3	pCi/g	0.147	0.246	0.246	1.96	0.194	U	0.423	U	20
LCS 160-525456/2-A	QC_LCS	LCS 160-525456/2-A	Soil	H-3	pCi/g	7.767	0.611	0.906	1.96	0.182		0.397		20
MB 160-525456/1-A	QC_BLK	MB 160-525456/1-A	Soil	H-3	pCi/g	0.2595	0.24	0.241	1.96	0.180		0.391	U	20
160-43113-1	SAMP	FSS-044-081721	Soil	Pu-238	pCi/g	-0.0095	0.0298	0.0298	1.96	0.0308	U	0.0996	U	240
160-43113-1	SAMP	FSS-044-081721	Soil	Pu-239/Pu-240	pCi/g	0.00951	0.0256	0.0256	1.96	0.0117	U	0.0614	U	240
160-43113-10	SAMP	FSS-053-081721	Soil	Pu-238	pCi/g	-0.176	0.0464	0.0486	1.96	0.0790	U	0.188	U	240
160-43113-10	SAMP	FSS-053-081721	Soil	Pu-239/Pu-240	pCi/g	-0.263	0.0546	0.0588	1.96	0.0958	U	0.221	U	240
160-43113-11	SAMP	FSS-054-081721	Soil	Pu-238	pCi/g	-0.00419	0.0058	0.00581	1.96	0.0109	U	0.0469	U	240
160-43113-11	SAMP	FSS-054-081721	Soil	Pu-239/Pu-240	pCi/g	-0.00419	0.00581	0.00582	1.96	0.0109	U	0.0469	U	240
160-43113-12	SAMP	FSS-055-081721	Soil	Pu-238	pCi/g	0.00	0.00454	0.00454	1.96	0.0085	U	0.0278	U	240
160-43113-12	SAMP	FSS-055-081721	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00455	0.00455	1.96	0.0085	U	0.0278	U	240
160-43113-13	SAMP	FSS-056-081721	Soil	Pu-238	pCi/g	-0.00275	0.0054	0.0054	1.96	0.0101	U	0.0533	U	240
160-43113-13	SAMP	FSS-056-081721	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0054	0.0054	1.96	0.0101	U	0.0331	U	240
160-43113-14	SAMP	FSS-256-081721	Soil	Pu-238	pCi/g	0.00272	0.0233	0.0233	1.96	0.0173	U	0.0673	U	240
160-43113-14	SAMP	FSS-256-081721	Soil	Pu-239/Pu-240	pCi/g	0.0272	0.0378	0.0378	1.96	0.0142		0.0610	U	240
160-43113-15	SAMP	FSS-057-081721	Soil	Pu-238	pCi/g	0.00778	0.0209	0.0210	1.96	0.0095	U	0.0502	U	240
160-43113-15	SAMP	FSS-057-081721	Soil	Pu-239/Pu-240	pCi/g	0.00778	0.0210	0.0210	1.96	0.0095	U	0.0502	U	240
160-43113-16	SAMP	FSS-257-081721	Soil	Pu-238	pCi/g	0.0217	0.0383	0.0384	1.96	0.0199		0.0724	U	240
160-43113-16	SAMP	FSS-257-081721	Soil	Pu-239/Pu-240	pCi/g	-0.00271	0.00532	0.00532	1.96	0.0100	U	0.0525	U	240
160-43113-17	SAMP	FSS-058-081721	Soil	Pu-238	pCi/g	-0.00615	0.00852	0.00854	1.96	0.0160	U	0.0689	U	240
160-43113-17	SAMP	FSS-058-081721	Soil	Pu-239/Pu-240	pCi/g	-0.00308	0.0277	0.0277	1.96	0.0253	U	0.0876	U	240
160-43113-18	SAMP	FSS-258-081721	Soil	Pu-238	pCi/g	0.018	0.0507	0.0507	1.96	0.0350	U	0.106	U	240
160-43113-18	SAMP	FSS-258-081721	Soil	Pu-239/Pu-240	pCi/g	0.0391	0.0483	0.0484	1.96	0.0192		0.0745	U	240

160-43113-2	SAMP	FSS-045-081721	Soil	Pu-238	pCi/g	-0.00925	0.00907	0.00910	1.96	0.0170	U	0.0618	U	240
160-43113-2	SAMP	FSS-045-081721	Soil	Pu-239/Pu-240	pCi/g	-0.00232	0.00454	0.00454	1.96	0.0085	U	0.0448	U	240
160-43113-3	SAMP	FSS-046-081721	Soil	Pu-238	pCi/g	-0.00867	0.0272	0.0272	1.96	0.0281	U	0.0909	U	240
160-43113-3	SAMP	FSS-046-081721	Soil	Pu-239/Pu-240	pCi/g	-0.00289	0.00567	0.00567	1.96	0.0106	U	0.0560	U	240
160-43113-4	SAMP	FSS-047-081721	Soil	Pu-238	pCi/g	-0.0111	0.0291	0.0291	1.96	0.0294	U	0.0854	U	240
160-43113-4	SAMP	FSS-047-081721	Soil	Pu-239/Pu-240	pCi/g	0.00222	0.0189	0.0189	1.96	0.0141	U	0.0549	U	240
160-43113-5	SAMP	FSS-048-081721	Soil	Pu-238	pCi/g	-0.0119	0.0287	0.0287	1.96	0.0310	U	0.0979	U	240
160-43113-5	SAMP	FSS-048-081721	Soil	Pu-239/Pu-240	pCi/g	0.0209	0.0336	0.0337	1.96	0.0110		0.0578	U	240
160-43113-6	SAMP	FSS-049-081721	Soil	Pu-238	pCi/g	-0.00446	0.00618	0.00619	1.96	0.0116	U	0.0499	U	240
160-43113-6	SAMP	FSS-049-081721	Soil	Pu-239/Pu-240	pCi/g	0.0156	0.0251	0.0252	1.96	0.0082		0.0432	U	240
160-43113-7	SAMP	FSS-050-081721	Soil	Pu-238	pCi/g	-0.00563	0.0078	0.00781	1.96	0.0146	U	0.0631	U	240
160-43113-7	SAMP	FSS-050-081721	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0247	0.0247	1.96	0.0207	U	0.0753	U	240
160-43113-8	SAMP	FSS-051-081721	Soil	Pu-238	pCi/g	-0.00306	0.0275	0.0275	1.96	0.0251	U	0.0870	U	240
160-43113-8	SAMP	FSS-051-081721	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00600	0.00600	1.96	0.0113	U	0.0367	U	240
160-43113-9	SAMP	FSS-052-081721	Soil	Pu-238	pCi/g	-0.00211	0.00414	0.00414	1.96	0.0078	U	0.0409	U	240
160-43113-9	SAMP	FSS-052-081721	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00414	0.00414	1.96	0.0078	U	0.0254	U	240
LCS 160-524624/2-A	QC_LCS	LCS 160-524624/2-A	Soil	Pu-238	pCi/g	5.825	0.585	0.756	1.96	0.1150		0.273		240
LCS 160-524624/2-A	QC_LCS	LCS 160-524624/2-A	Soil	Pu-239/Pu-240	pCi/g	5.892	0.596	0.768	1.96	0.1395		0.322		240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-238	pCi/g	5.059	0.390	0.571	1.96	0.0161		0.0555		240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-239/Pu-240	pCi/g	5.285	0.398	0.590	1.96	0.0072		0.0235		240
MB 160-524624/1-A	QC_BLK	MB 160-524624/1-A	Soil	Pu-238	pCi/g	-0.00243	0.00476	0.00476	1.96	0.0089	U	0.0470	U	240
MB 160-524624/1-A	QC_BLK	MB 160-524624/1-A	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00476	0.00476	1.96	0.0089	U	0.0291	U	240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-238	pCi/g	-0.00412	0.00571	0.00572	1.96	0.0107	U	0.0461	U	240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.00825	0.00808	0.00811	1.96	0.0152	U	0.0551	U	240
160-43113-1	SAMP	FSS-044-081721	Soil	U-235/U-236	pCi/g	0.0246	0.0395	0.0396	1.96	0.0129		0.0680	U	240
160-43113-1	SAMP	FSS-044-081721	Soil	U-238	pCi/g	0.0704	0.0592	0.0595	1.96	0.0179		0.0697		240
160-43113-10	SAMP	FSS-053-081721	Soil	U-235/U-236	pCi/g	0.0186	0.0299	0.0299	1.96	0.0098		0.0513	U	240
160-43113-10	SAMP	FSS-053-081721	Soil	U-238	pCi/g	0.187	0.0782	0.0797	1.96	0.0078		0.0255		240
160-43113-11	SAMP	FSS-054-081721	Soil	U-235/U-236	pCi/g	-0.00622	0.00862	0.00864	1.96	0.0162	U	0.0697	U	240
160-43113-11	SAMP	FSS-054-081721	Soil	U-238	pCi/g	0.19	0.0853	0.0867	1.96	0.0092		0.0299		240
160-43113-12	SAMP	FSS-055-081721	Soil	U-235/U-236	pCi/g	0.0232	0.0322	0.0323	1.96	0.0107		0.0348	U	240
160-43113-12	SAMP	FSS-055-081721	Soil	U-238	pCi/g	0.219	0.0897	0.0915	1.96	0.0121		0.0522		240
160-43113-13	SAMP	FSS-056-081721	Soil	U-235/U-236	pCi/g	-0.00329	0.00645	0.00646	1.96	0.0121	U	0.0637	U	240
160-43113-13	SAMP	FSS-056-081721	Soil	U-238	pCi/g	0.29	0.110	0.112	1.96	0.0137		0.0591		240
160-43113-14	SAMP	FSS-256-081721	Soil	U-235/U-236	pCi/g	0.0251	0.0404	0.0405	1.96	0.0132		0.0695	U	240
160-43113-14	SAMP	FSS-256-081721	Soil	U-238	pCi/g	0.199	0.0962	0.0976	1.96	0.0183		0.0712		240
160-43113-15	SAMP	FSS-057-081721	Soil	U-235/U-236	pCi/g	0.0549	0.0538	0.054	1.96	0.0126		0.0412		240
160-43113-15	SAMP	FSS-057-081721	Soil	U-238	pCi/g	0.176	0.0896	0.0908	1.96	0.0202		0.0735		240
160-43113-16	SAMP	FSS-257-081721	Soil	U-235/U-236	pCi/g	-0.00694	0.00962	0.00964	1.96	0.0181	U	0.0778	U	240
160-43113-16	SAMP	FSS-257-081721	Soil	U-238	pCi/g	0.239	0.103	0.105	1.96	0.0145		0.0624		240
160-43113-17	SAMP	FSS-058-081721	Soil	U-235/U-236	pCi/g	-0.0035	0.00687	0.00688	1.96	0.0129	U	0.0678	U	240
160-43113-17	SAMP	FSS-058-081721	Soil	U-238	pCi/g	0.259	0.109	0.111	1.96	0.0207		0.0751		240
160-43113-18	SAMP	FSS-258-081721	Soil	U-235/U-236	pCi/g	0.0323	0.0448	0.0448	1.96	0.0168		0.0724	U	240
160-43113-18	SAMP	FSS-258-081721	Soil	U-238	pCi/g	0.0466	0.0513	0.0514	1.96	0.0233		0.0778	U	240
160-43113-2	SAMP	FSS-045-081721	Soil	U-235/U-236	pCi/g	0.0334	0.0416	0.0417	1.96	0.0112		0.0587	U	240
160-43113-2	SAMP	FSS-045-081721	Soil	U-238	pCi/g	0.107	0.0668	0.0674	1.96	0.0179		0.0650		240
160-43113-3	SAMP	FSS-046-081721	Soil	U-235/U-236	pCi/g	0.0379	0.0429	0.0430	1.96	0.0116		0.0379		240
160-43113-3	SAMP	FSS-046-081721	Soil	U-238	pCi/g	0.142	0.0743	0.0752	1.96	0.0093		0.0304		240
160-43113-4	SAMP	FSS-047-081721	Soil	U-235/U-236	pCi/g	-0.00595	0.00824	0.00826	1.96	0.0155	U	0.0666	U	240
160-43113-4	SAMP	FSS-047-081721	Soil	U-238	pCi/g	0.277	0.105	0.107	1.96	0.0248		0.0783		240
160-43113-5	SAMP	FSS-048-081721	Soil	U-235/U-236	pCi/g	0.0447	0.0506	0.0507	1.96	0.0137		0.0447		240
160-43113-5	SAMP	FSS-048-081721	Soil	U-238	pCi/g	0.191	0.0937	0.0950	1.96	0.0110		0.0359		240
160-43113-6	SAMP	FSS-049-081721	Soil	U-235/U-236	pCi/g	-0.00271	0.00531	0.00532	1.96	0.0100	U	0.0525	U	240
160-43113-6	SAMP	FSS-049-081721	Soil	U-238	pCi/g	0.215	0.0874	0.0892	1.96	0.0179		0.0619		240
160-43113-7	SAMP	FSS-050-081721	Soil	U-235/U-236	pCi/g	0.0360	0.0408	0.0409	1.96	0.0110		0.0360		240
160-43113-7	SAMP	FSS-050-081721	Soil	U-238	pCi/g	0.0867	0.0604	0.0609	1.96	0.0177		0.0643		240
160-43113-8	SAMP	FSS-051-081721	Soil	U-235/U-236	pCi/g	-0.00652	0.00904	0.00905	1.96	0.0170	U	0.0730	U	240
160-43113-8	SAMP	FSS-051-081721	Soil	U-238	pCi/g	0.0784	0.0584	0.0588	1.96	0.0136		0.0586		240
160-43113-9	SAMP	FSS-052-081721	Soil	U-235/U-236	pCi/g	0.0216	0.0299	0.0300	1.96	0.0099		0.0324	U	240
160-43113-9	SAMP	FSS-052-081721	Soil	U-238	pCi/g	0.433	0.120	0.125	1.96	0.0080		0.0260		240
LCS 160-524626/2-A	QC_LCS	LCS 160-524626/2-A	Soil	U-233/U-234	pCi/g	6.892	0.541	0.784	1.96	0.0248		0.0826		240
LCS 160-524626/2-A	QC_LCS	LCS 160-524626/2-A	Soil	U-238	pCi/g	6.673	0.531	0.764	1.96	0.0226		0.0781		240
LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-233/U-234	pCi/g	5.631	0.426	0.629	1.96	0.0188		0.0627		240

LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-238	pCi/g	6.623	0.461	0.714	1.96	0.0172		0.0593		240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-233/U-234	pCi/g	-0.0051	0.0394	0.0394	1.96	0.0351	U	0.101	U	240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-235/U-236	pCi/g	-0.02857	0.0187	0.0188	1.96	0.0350	U	0.108	U	240
MB 160-524626/1-A	QC_BLK	MB 160-524626/1-A	Soil	U-238	pCi/g	-0.00509	0.00706	0.00707	1.96	0.0132	U	0.0570	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-233/U-234	pCi/g	0.01627	0.0288	0.0288	1.96	0.0150		0.0543	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-235/U-236	pCi/g	0.007594	0.0205	0.0205	1.96	0.0093	U	0.0490	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-238	pCi/g	-0.00203	0.0182	0.0182	1.96	0.0167	U	0.0578	U	240
160-43113-1	SAMP	FSS-044-081721	Soil	C-14	pCi/g	-0.191	0.450	0.450	1.96	0.367	U	0.774	U	30
160-43113-1 DU	QC_DUP	160-43113-1 DU	Soil	C-14	pCi/g	-0.6189	0.449	0.454	1.96	0.387	U	0.818	U	30
160-43113-1 MS	QC_MS	160-43113-1 MS	Soil	C-14	pCi/g	79.23	2.38	8.72	1.96	0.471		0.995		30
160-43113-10	SAMP	FSS-053-081721	Soil	C-14	pCi/g	0.455	0.724	0.725	1.96	0.583	U	1.24	U	20
160-43113-11	SAMP	FSS-054-081721	Soil	C-14	pCi/g	0.454	0.706	0.708	1.96	0.569	U	1.21	U	20
160-43113-12	SAMP	FSS-055-081721	Soil	C-14	pCi/g	0.0322	0.688	0.688	1.96	0.576	U	1.23	U	20
160-43113-13	SAMP	FSS-056-081721	Soil	C-14	pCi/g	0.622	0.790	0.792	1.96	0.633	U	1.35	U	20
160-43113-14	SAMP	FSS-256-081721	Soil	C-14	pCi/g	-0.541	0.539	0.542	1.96	0.453	U	0.957	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	C-14	pCi/g	-0.68	0.571	0.575	1.96	0.487	U	1.03	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	C-14	pCi/g	-0.118	0.531	0.532	1.96	0.430	U	0.907	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	C-14	pCi/g	-0.446	0.535	0.537	1.96	0.447	U	0.945	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	C-14	pCi/g	0.170	0.383	0.383	1.96	0.298	U	0.629	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	C-14	pCi/g	-0.0656	0.397	0.397	1.96	0.319	U	0.674	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	C-14	pCi/g	-0.357	0.604	0.605	1.96	0.497	U	1.05	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	C-14	pCi/g	-0.180	0.562	0.562	1.96	0.455	U	0.960	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	C-14	pCi/g	-0.0735	0.442	0.442	1.96	0.355	U	0.750	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	C-14	pCi/g	-0.680	0.585	0.589	1.96	0.499	U	1.05	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	C-14	pCi/g	0.369	0.562	0.563	1.96	0.451	U	0.960	U	20
160-43113-8	SAMP	FSS-051-081721	Soil	C-14	pCi/g	0.259	0.784	0.785	1.96	0.646	U	1.37	U	20
160-43113-9	SAMP	FSS-052-081721	Soil	C-14	pCi/g	0.128	0.759	0.759	1.96	0.630	U	1.34	U	20
LCS 160-527261/2-A	QC_LCS	LCS 160-527261/2-A	Soil	C-14	pCi/g	82.32	3.03	9.23	1.96	0.645		1.37		20
LCS 160-527451/2-A	QC_LCS	LCS 160-527451/2-A	Soil	C-14	pCi/g	81.63	2.50	8.99	1.96	0.501		1.06		30
MB 160-527261/1-A	QC_BLK	MB 160-527261/1-A	Soil	C-14	pCi/g	-0.3198	0.746	0.747	1.96	0.645	U	1.37	U	20
MB 160-527451/1-A	QC_BLK	MB 160-527451/1-A	Soil	C-14	pCi/g	-0.3874	0.612	0.614	1.96	0.506	U	1.07	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Cs-137	pCi/g	-0.0347	0.0483	0.0484	1.96	0.0481	U	0.104	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Co-60	pCi/g	0.0293	0.0217	0.0219	1.96	0.00977		0.0309	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	K-40	pCi/g	2.51	0.717	0.76	1.96	0.2683		0.651		30
160-43113-1	SAMP	FSS-044-081721	Soil	Na-22	pCi/g	-0.0284	0.0496	0.0497	1.96	0.0378	U	0.0865	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Zn-65	pCi/g	-0.00402	0.0788	0.0788	1.96	0.0834	U	0.186	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Ra-226	pCi/g	0.297	0.0836	0.0889	1.96	0.0283		0.0703		30
160-43113-1	SAMP	FSS-044-081721	Soil	Ac-228	pCi/g	0.258	0.130	0.132	1.96	0.0941		0.217		30
160-43113-1	SAMP	FSS-044-081721	Soil	Eu-155	pCi/g	0.145	0.0923	0.0936	1.96	0.0509		0.112		30
160-43113-1	SAMP	FSS-044-081721	Soil	Am-241	pCi/g	0.0417	0.152	0.152	1.96	0.126	U	0.262	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Eu-152	pCi/g	0.0613	0.161	0.161	1.96	0.0694	U	0.147	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Bi-214	pCi/g	0.297	0.0836	0.0889	1.96	0.0283		0.0703		30
160-43113-1	SAMP	FSS-044-081721	Soil	Bi-212	pCi/g	0.271	0.528	0.529	1.96	0.414	U	0.922	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Pb-214	pCi/g	0.305	0.0766	0.0827	1.96	0.0342		0.0796		30
160-43113-1	SAMP	FSS-044-081721	Soil	Pb-212	pCi/g	0.321	0.0731	0.0837	1.96	0.0368		0.0811		30
160-43113-1	SAMP	FSS-044-081721	Soil	Eu-154	pCi/g	0.0103	0.0131	0.0131	1.96	0.0511	U	0.108	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Th-232	pCi/g	0.258	0.130	0.132	1.96	0.0941		0.217		30
160-43113-10	SAMP	FSS-053-081721	Soil	Cs-137	pCi/g	-0.0198	0.0449	0.0449	1.96	0.0516	U	0.113	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Co-60	pCi/g	-0.00869	0.102	0.102	1.96	0.0318	U	0.0793	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	K-40	pCi/g	7.60	1.35	1.54	1.96	0.234		0.628		30
160-43113-10	SAMP	FSS-053-081721	Soil	Na-22	pCi/g	-0.0112	0.0380	0.0380	1.96	0.0291	U	0.0734	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Zn-65	pCi/g	-0.0384	0.161	0.161	1.96	0.132	U	0.290	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Ra-226	pCi/g	0.268	0.105	0.108	1.96	0.041		0.0989		30
160-43113-10	SAMP	FSS-053-081721	Soil	Ac-228	pCi/g	0.353	0.139	0.143	1.96	0.0725		0.184		30
160-43113-10	SAMP	FSS-053-081721	Soil	Eu-155	pCi/g	-0.076	0.230	0.230	1.96	0.180	U	0.370	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Am-241	pCi/g	0.0518	0.124	0.124	1.96	0.102	U	0.212	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Eu-152	pCi/g	0.00954	0.0196	0.0196	1.96	0.0713	U	0.151	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Bi-214	pCi/g	0.268	0.105	0.108	1.96	0.0408		0.0989		30
160-43113-10	SAMP	FSS-053-081721	Soil	Bi-212	pCi/g	-0.393	0.839	0.84	1.96	0.670	U	1.46	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Pb-214	pCi/g	0.262	0.0784	0.0826	1.96	0.0458		0.104		30
160-43113-10	SAMP	FSS-053-081721	Soil	Pb-212	pCi/g	0.315	0.0702	0.0772	1.96	0.0312		0.0703		30
160-43113-10	SAMP	FSS-053-081721	Soil	Eu-154	pCi/g	0.0133	0.115	0.115	1.96	0.0436	U	0.0929	U	30
160-43113-10	SAMP	FSS-053-081721	Soil	Th-232	pCi/g	0.353	0.139	0.143	1.96	0.0725		0.184		30

160-43113-11	SAMP	FSS-054-081721	Soil	Cs-137	pCi/g	0.0161	0.0398	0.0398	1.96	0.0318	U	0.0704	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Co-60	pCi/g	-0.00246	0.0407	0.0407	1.96	0.0204	U	0.0508	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	K-40	pCi/g	4.94	0.894	1.02	1.96	0.2482		0.597		30
160-43113-11	SAMP	FSS-054-081721	Soil	Na-22	pCi/g	-0.0142	0.0430	0.0430	1.96	0.0342	U	0.078	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Zn-65	pCi/g	-0.0834	0.155	0.155	1.96	0.124	U	0.266	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Ra-226	pCi/g	0.367	0.0986	0.105	1.96	0.0430		0.0978		30
160-43113-11	SAMP	FSS-054-081721	Soil	Ac-228	pCi/g	0.367	0.164	0.168	1.96	0.0620		0.149		30
160-43113-11	SAMP	FSS-054-081721	Soil	Eu-155	pCi/g	-0.0697	0.131	0.131	1.96	0.192	U	0.393	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Am-241	pCi/g	-0.0414	0.0885	0.0886	1.96	0.111	U	0.230	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Eu-152	pCi/g	0.026	0.0421	0.0422	1.96	0.0726	U	0.152	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Bi-214	pCi/g	0.367	0.0986	0.105	1.96	0.0430		0.0978		30
160-43113-11	SAMP	FSS-054-081721	Soil	Bi-212	pCi/g	0.293	0.509	0.510	1.96	0.399	U	0.880	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Pb-214	pCi/g	0.414	0.0827	0.0928	1.96	0.0450		0.0998		30
160-43113-11	SAMP	FSS-054-081721	Soil	Pb-212	pCi/g	0.313	0.0659	0.0769	1.96	0.0321		0.0706		30
160-43113-11	SAMP	FSS-054-081721	Soil	Eu-154	pCi/g	0.0441	0.0743	0.0745	1.96	0.0474	U	0.0996	U	30
160-43113-11	SAMP	FSS-054-081721	Soil	Th-232	pCi/g	0.367	0.164	0.168	1.96	0.0620		0.149		30
160-43113-12	SAMP	FSS-055-081721	Soil	Cs-137	pCi/g	-0.0509	0.0475	0.0478	1.96	0.0701	U	0.151	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Co-60	pCi/g	-0.00895	0.0598	0.0598	1.96	0.0327	U	0.0817	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	K-40	pCi/g	3.86	0.996	1.07	1.96	0.241		0.648		30
160-43113-12	SAMP	FSS-055-081721	Soil	Na-22	pCi/g	0.00	0.0160	0.0160	1.96	0.0300	U	0.0757	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Zn-65	pCi/g	0.00	0.0281	0.0281	1.96	0.129	U	0.286	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Ra-226	pCi/g	0.289	0.0947	0.099	1.96	0.0318		0.0816		30
160-43113-12	SAMP	FSS-055-081721	Soil	Ac-228	pCi/g	0.386	0.148	0.153	1.96	0.0346		0.109		30
160-43113-12	SAMP	FSS-055-081721	Soil	Eu-155	pCi/g	0.0422	0.0860	0.0862	1.96	0.106	U	0.223	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Am-241	pCi/g	-0.0534	0.141	0.142	1.96	0.117	U	0.243	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Eu-152	pCi/g	0.105	0.137	0.137	1.96	0.0532		0.115	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Bi-214	pCi/g	0.289	0.0947	0.0990	1.96	0.0318		0.0816		30
160-43113-12	SAMP	FSS-055-081721	Soil	Bi-212	pCi/g	-0.0392	0.587	0.587	1.96	0.488	U	1.10	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Pb-214	pCi/g	0.166	0.0789	0.0806	1.96	0.0385		0.0903		30
160-43113-12	SAMP	FSS-055-081721	Soil	Pb-212	pCi/g	0.250	0.0677	0.0724	1.96	0.0344		0.0769		30
160-43113-12	SAMP	FSS-055-081721	Soil	Eu-154	pCi/g	0.00644	0.0434	0.0434	1.96	0.0415	U	0.0887	U	30
160-43113-12	SAMP	FSS-055-081721	Soil	Th-232	pCi/g	0.386	0.148	0.153	1.96	0.0346		0.109		30
160-43113-13	SAMP	FSS-056-081721	Soil	Cs-137	pCi/g	0.128	0.0342	0.0366	1.96	0.0055		0.0175		30
160-43113-13	SAMP	FSS-056-081721	Soil	Co-60	pCi/g	-0.00581	0.0392	0.0392	1.96	0.0193	U	0.0481	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	K-40	pCi/g	4.08	0.797	0.896	1.96	0.2350		0.565		30
160-43113-13	SAMP	FSS-056-081721	Soil	Na-22	pCi/g	0.00785	0.0382	0.0382	1.96	0.019	U	0.0465	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Zn-65	pCi/g	0.00	0.0166	0.0166	1.96	0.0622	U	0.141	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Ra-226	pCi/g	0.259	0.0876	0.0915	1.96	0.0384		0.0879		30
160-43113-13	SAMP	FSS-056-081721	Soil	Ac-228	pCi/g	0.32	0.135	0.139	1.96	0.0464		0.117		30
160-43113-13	SAMP	FSS-056-081721	Soil	Eu-155	pCi/g	-0.0722	0.174	0.174	1.96	0.192	U	0.393	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Am-241	pCi/g	0.0438	0.0925	0.0926	1.96	0.0571	U	0.122	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Eu-152	pCi/g	0.0445	0.147	0.147	1.96	0.121	U	0.255	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Bi-214	pCi/g	0.259	0.0876	0.0915	1.96	0.0384		0.0879		30
160-43113-13	SAMP	FSS-056-081721	Soil	Bi-212	pCi/g	0.160	0.419	0.419	1.96	0.334	U	0.746	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Pb-214	pCi/g	0.259	0.0778	0.0821	1.96	0.0326		0.0744		30
160-43113-13	SAMP	FSS-056-081721	Soil	Pb-212	pCi/g	0.344	0.0603	0.0744	1.96	0.0212		0.0486		30
160-43113-13	SAMP	FSS-056-081721	Soil	Eu-154	pCi/g	0.0138	0.0536	0.0536	1.96	0.0387	U	0.0819	U	30
160-43113-13	SAMP	FSS-056-081721	Soil	Th-232	pCi/g	0.320	0.135	0.139	1.96	0.0464		0.117		30
160-43113-14	SAMP	FSS-256-081721	Soil	Cs-137	pCi/g	0.102	0.0309	0.0326	1.96	0.0057		0.0179		30
160-43113-14	SAMP	FSS-256-081721	Soil	Co-60	pCi/g	-0.0119	0.0567	0.0567	1.96	0.0280	U	0.0657	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	K-40	pCi/g	4.07	0.750	0.854	1.96	0.0839		0.265		30
160-43113-14	SAMP	FSS-256-081721	Soil	Na-22	pCi/g	-0.0345	0.0448	0.0449	1.96	0.0331	U	0.0756	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Zn-65	pCi/g	0.00306	0.0986	0.0986	1.96	0.0826	U	0.182	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Ra-226	pCi/g	0.274	0.0847	0.0892	1.96	0.0370		0.0854		30
160-43113-14	SAMP	FSS-256-081721	Soil	Ac-228	pCi/g	0.195	0.0971	0.0990	1.96	0.106		0.237	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Eu-155	pCi/g	-0.0782	0.232	0.232	1.96	0.193	U	0.395	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Am-241	pCi/g	0.0483	0.103	0.103	1.96	0.0841	U	0.176	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Eu-152	pCi/g	0.036	0.0572	0.0574	1.96	0.0651	U	0.137	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Bi-214	pCi/g	0.274	0.0847	0.0892	1.96	0.0370		0.0854		30
160-43113-14	SAMP	FSS-256-081721	Soil	Bi-212	pCi/g	0.211	0.436	0.436	1.96	0.342	U	0.765	U	30
160-43113-14	SAMP	FSS-256-081721	Soil	Pb-214	pCi/g	0.267	0.0675	0.0728	1.96	0.0386		0.0866		30
160-43113-14	SAMP	FSS-256-081721	Soil	Pb-212	pCi/g	0.336	0.0635	0.0765	1.96	0.0274		0.0611		30
160-43113-14	SAMP	FSS-256-081721	Soil	Eu-154	pCi/g	0.0407	0.0517	0.0519	1.96	0.0454	U	0.0955	U	30

160-43113-14	SAMP	FSS-256-081721	Soil	Th-232	pCi/g	0.195	0.0971	0.0990	1.96	0.106		0.237	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Cs-137	pCi/g	0.256	0.0770	0.0812	1.96	0.0375		0.0858		30
160-43113-15	SAMP	FSS-057-081721	Soil	Co-60	pCi/g	-0.0488	0.0339	0.0342	1.96	0.0478	U	0.113	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	K-40	pCi/g	3.32	0.950	1.01	1.96	0.251		0.674		30
160-43113-15	SAMP	FSS-057-081721	Soil	Na-22	pCi/g	0.0120	0.0407	0.0407	1.96	0.0312	U	0.0787	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Zn-65	pCi/g	0.00	0.0292	0.0292	1.96	0.128	U	0.284	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Ra-226	pCi/g	0.295	0.107	0.111	1.96	0.0447		0.108		30
160-43113-15	SAMP	FSS-057-081721	Soil	Ac-228	pCi/g	0.355	0.145	0.149	1.96	0.0360		0.114		30
160-43113-15	SAMP	FSS-057-081721	Soil	Eu-155	pCi/g	0.0301	0.0847	0.0847	1.96	0.143	U	0.297	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Am-241	pCi/g	0.0598	0.143	0.143	1.96	0.118	U	0.245	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Eu-152	pCi/g	0.0898	0.186	0.187	1.96	0.0765		0.162	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Bi-214	pCi/g	0.295	0.107	0.111	1.96	0.0447		0.108		30
160-43113-15	SAMP	FSS-057-081721	Soil	Bi-212	pCi/g	0.0489	0.658	0.658	1.96	0.547	U	1.23	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Pb-214	pCi/g	0.383	0.0872	0.0951	1.96	0.0685		0.151		30
160-43113-15	SAMP	FSS-057-081721	Soil	Pb-212	pCi/g	0.325	0.0739	0.0810	1.96	0.0329		0.0743		30
160-43113-15	SAMP	FSS-057-081721	Soil	Eu-154	pCi/g	0.0291	0.0649	0.0649	1.96	0.0529	U	0.112	U	30
160-43113-15	SAMP	FSS-057-081721	Soil	Th-232	pCi/g	0.355	0.145	0.149	1.96	0.0360		0.114		30
160-43113-16	SAMP	FSS-257-081721	Soil	Cs-137	pCi/g	0.156	0.0446	0.0473	1.96	0.0116		0.0302		30
160-43113-16	SAMP	FSS-257-081721	Soil	Co-60	pCi/g	0.00125	0.0412	0.0412	1.96	0.0208	U	0.0517	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	K-40	pCi/g	3.62	0.789	0.868	1.96	0.252		0.607		30
160-43113-16	SAMP	FSS-257-081721	Soil	Na-22	pCi/g	0.00482	0.0252	0.0252	1.96	0.0200	U	0.0499	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Zn-65	pCi/g	0.00	0.0178	0.0178	1.96	0.0934	U	0.204	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Ra-226	pCi/g	0.0191	0.0913	0.0913	1.96	0.100	U	0.213	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Ac-228	pCi/g	0.128	0.167	0.168	1.96	0.122		0.270	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Eu-155	pCi/g	0.0473	0.116	0.116	1.96	0.157	U	0.323	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Am-241	pCi/g	-0.0587	0.0173	0.0183	1.96	0.102	U	0.213	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Eu-152	pCi/g	0.0589	0.105	0.105	1.96	0.0592	U	0.125	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Bi-214	pCi/g	0.0191	0.0913	0.0913	1.96	0.100	U	0.213	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Bi-212	pCi/g	-0.0154	0.540	0.540	1.96	0.452	U	0.988	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Pb-214	pCi/g	0.294	0.0716	0.0776	1.96	0.0265		0.063		30
160-43113-16	SAMP	FSS-257-081721	Soil	Pb-212	pCi/g	0.321	0.0697	0.0807	1.96	0.0363		0.0791		30
160-43113-16	SAMP	FSS-257-081721	Soil	Eu-154	pCi/g	0.0215	0.0359	0.036	1.96	0.0349	U	0.0747	U	30
160-43113-16	SAMP	FSS-257-081721	Soil	Th-232	pCi/g	0.128	0.167	0.168	1.96	0.122		0.270	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Cs-137	pCi/g	0.117	0.0443	0.0459	1.96	0.0158		0.0381		30
160-43113-17	SAMP	FSS-058-081721	Soil	Co-60	pCi/g	0.0117	0.0405	0.0405	1.96	0.0195	U	0.0486	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	K-40	pCi/g	2.06	0.671	0.702	1.96	0.203		0.501		30
160-43113-17	SAMP	FSS-058-081721	Soil	Na-22	pCi/g	0.00453	0.0237	0.0237	1.96	0.0188	U	0.0469	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Zn-65	pCi/g	5.76E-09	0.0946	0.0946	1.96	0.0795	U	0.175	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Ra-226	pCi/g	0.197	0.0784	0.0809	1.96	0.0373		0.0858		30
160-43113-17	SAMP	FSS-058-081721	Soil	Ac-228	pCi/g	0.127	0.0642	0.0654	1.96	0.0209		0.0663		30
160-43113-17	SAMP	FSS-058-081721	Soil	Eu-155	pCi/g	0.00632	0.0162	0.0162	1.96	0.185	U	0.378	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Am-241	pCi/g	-0.0227	0.114	0.114	1.96	0.0950	U	0.198	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Eu-152	pCi/g	0.0127	0.0182	0.0182	1.96	0.0613	U	0.129	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Bi-214	pCi/g	0.197	0.0784	0.0809	1.96	0.0373		0.0858		30
160-43113-17	SAMP	FSS-058-081721	Soil	Bi-212	pCi/g	0.232	0.359	0.360	1.96	0.270	U	0.619	U	30
160-43113-17	SAMP	FSS-058-081721	Soil	Pb-214	pCi/g	0.249	0.0673	0.0719	1.96	0.0569		0.123		30
160-43113-17	SAMP	FSS-058-081721	Soil	Pb-212	pCi/g	0.418	0.0948	0.109	1.96	0.0614		0.129		30
160-43113-17	SAMP	FSS-058-081721	Soil	Eu-154	pCi/g	0.103	0.0429	0.0442	1.96	0.0443		0.0932		30
160-43113-17	SAMP	FSS-058-081721	Soil	Th-232	pCi/g	0.127	0.0642	0.0654	1.96	0.0209		0.0663		30
160-43113-18	SAMP	FSS-258-081721	Soil	Cs-137	pCi/g	0.232	0.0619	0.0663	1.96	0.0158		0.0404		30
160-43113-18	SAMP	FSS-258-081721	Soil	Co-60	pCi/g	-0.027	0.0727	0.0728	1.96	0.0362	U	0.0853	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	K-40	pCi/g	2.71	0.798	0.843	1.96	0.305		0.739		30
160-43113-18	SAMP	FSS-258-081721	Soil	Na-22	pCi/g	0.00	0.00901	0.00901	1.96	0.0107	U	0.0339	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Zn-65	pCi/g	0.0446	0.104	0.104	1.96	0.0815	U	0.185	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Ra-226	pCi/g	0.354	0.105	0.111	1.96	0.0400		0.0954		30
160-43113-18	SAMP	FSS-258-081721	Soil	Ac-228	pCi/g	0.533	0.112	0.124	1.96	0.0286		0.0903		30
160-43113-18	SAMP	FSS-258-081721	Soil	Eu-155	pCi/g	-0.0963	0.129	0.129	1.96	0.229	U	0.469	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Am-241	pCi/g	0.0606	0.15	0.15	1.96	0.123	U	0.257	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Eu-152	pCi/g	0.0167	0.022	0.0221	1.96	0.0988	U	0.207	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Bi-214	pCi/g	0.354	0.105	0.111	1.96	0.0400		0.0954		30
160-43113-18	SAMP	FSS-258-081721	Soil	Bi-212	pCi/g	-0.0464	0.851	0.851	1.96	0.712	U	1.53	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Pb-214	pCi/g	0.344	0.0943	0.101	1.96	0.0290		0.0708		30
160-43113-18	SAMP	FSS-258-081721	Soil	Pb-212	pCi/g	0.394	0.079	0.0935	1.96	0.0322		0.0728		30

160-43113-18	SAMP	FSS-258-081721	Soil	Eu-154	pCi/g	-0.0293	0.0752	0.0752	1.96	0.0617	U	0.130	U	30
160-43113-18	SAMP	FSS-258-081721	Soil	Th-232	pCi/g	0.533	0.112	0.124	1.96	0.0286		0.0903		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Cs-137	pCi/g	0.2839	0.0884	0.0929	1.96	0.0473		0.106		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Co-60	pCi/g	-0.0012	0.00228	0.00229	1.96	0.0510	U	0.120	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	K-40	pCi/g	3.059	0.950	0.997	1.96	0.267		0.718		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Na-22	pCi/g	0.03834	0.0307	0.0309	1.96	0.0149		0.0471	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Zn-65	pCi/g	0.00	0.022	0.0220	1.96	0.143	U	0.317	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Ra-226	pCi/g	0.3352	0.104	0.110	1.96	0.0353		0.0905		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Ac-228	pCi/g	0.4885	0.136	0.144	1.96	0.0384		0.121		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Eu-155	pCi/g	0.06537	0.143	0.143	1.96	0.116	U	0.245	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Am-241	pCi/g	-0.06372	0.168	0.168	1.96	0.139	U	0.288	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Eu-152	pCi/g	-0.03015	0.0440	0.0441	1.96	0.221	U	0.462	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Bi-214	pCi/g	0.3352	0.104	0.11	1.96	0.0353		0.0905		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Bi-212	pCi/g	-0.01739	0.824	0.824	1.96	0.691	U	1.52	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Pb-214	pCi/g	0.3761	0.0895	0.097	1.96	0.0387		0.0921		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Pb-212	pCi/g	0.5126	0.0898	0.104	1.96	0.0324		0.0738		30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Eu-154	pCi/g	0.006337	0.0167	0.0167	1.96	0.0678	U	0.142	U	30
160-43113-18 DU	QC_DUP	160-43113-18 DU	Soil	Th-232	pCi/g	0.4885	0.136	0.144	1.96	0.0384		0.121		30
160-43113-2	SAMP	FSS-045-081721	Soil	Cs-137	pCi/g	0.0865	0.0275	0.0289	1.96	0.0053		0.0168		30
160-43113-2	SAMP	FSS-045-081721	Soil	Co-60	pCi/g	0.00	0.00926	0.00926	1.96	0.0078	U	0.0246	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	K-40	pCi/g	2.35	0.619	0.662	1.96	0.225		0.542		30
160-43113-2	SAMP	FSS-045-081721	Soil	Na-22	pCi/g	-0.0323	0.0419	0.0421	1.96	0.0310	U	0.0707	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Zn-65	pCi/g	0.00	0.0112	0.0112	1.96	0.0712	U	0.158	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Ra-226	pCi/g	0.254	0.0800	0.0840	1.96	0.0348		0.0803		30
160-43113-2	SAMP	FSS-045-081721	Soil	Ac-228	pCi/g	0.205	0.164	0.166	1.96	0.0770		0.177		30
160-43113-2	SAMP	FSS-045-081721	Soil	Eu-155	pCi/g	0.0303	0.198	0.198	1.96	0.165	U	0.339	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Am-241	pCi/g	0.0430	0.101	0.101	1.96	0.0831	U	0.173	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Eu-152	pCi/g	0.0626	0.114	0.114	1.96	0.0571		0.120	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Bi-214	pCi/g	0.254	0.0800	0.0840	1.96	0.0348		0.0803		30
160-43113-2	SAMP	FSS-045-081721	Soil	Bi-212	pCi/g	0.116	0.548	0.548	1.96	0.451	U	0.976	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Pb-214	pCi/g	0.310	0.0707	0.0774	1.96	0.0273		0.0634		30
160-43113-2	SAMP	FSS-045-081721	Soil	Pb-212	pCi/g	0.315	0.0579	0.0703	1.96	0.0226		0.0511		30
160-43113-2	SAMP	FSS-045-081721	Soil	Eu-154	pCi/g	-0.0019	0.0445	0.0445	1.96	0.0373	U	0.079	U	30
160-43113-2	SAMP	FSS-045-081721	Soil	Th-232	pCi/g	0.205	0.164	0.166	1.96	0.0770		0.177		30
160-43113-3	SAMP	FSS-046-081721	Soil	Cs-137	pCi/g	-0.021	0.0613	0.0614	1.96	0.0489	U	0.106	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Co-60	pCi/g	0.0256	0.0510	0.0511	1.96	0.0243		0.0608	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	K-40	pCi/g	1.57	0.632	0.651	1.96	0.289		0.701		30
160-43113-3	SAMP	FSS-046-081721	Soil	Na-22	pCi/g	-0.016	0.0428	0.0428	1.96	0.0332	U	0.0783	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Zn-65	pCi/g	-0.0162	0.0427	0.0427	1.96	0.0977	U	0.217	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Ra-226	pCi/g	0.364	0.108	0.115	1.96	0.0400		0.0946		30
160-43113-3	SAMP	FSS-046-081721	Soil	Ac-228	pCi/g	0.428	0.156	0.162	1.96	0.101		0.234		30
160-43113-3	SAMP	FSS-046-081721	Soil	Eu-155	pCi/g	-0.0763	0.126	0.127	1.96	0.164	U	0.340	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Am-241	pCi/g	0.0427	0.161	0.161	1.96	0.134	U	0.278	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Eu-152	pCi/g	0.0547	0.0591	0.0594	1.96	0.0879	U	0.184	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Bi-214	pCi/g	0.364	0.108	0.115	1.96	0.0400		0.0946		30
160-43113-3	SAMP	FSS-046-081721	Soil	Bi-212	pCi/g	0.330	0.585	0.586	1.96	0.4566	U	1.02	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Pb-214	pCi/g	0.299	0.0863	0.0915	1.96	0.033		0.078		30
160-43113-3	SAMP	FSS-046-081721	Soil	Pb-212	pCi/g	0.428	0.0821	0.0985	1.96	0.0360		0.080		30
160-43113-3	SAMP	FSS-046-081721	Soil	Eu-154	pCi/g	0.0764	0.125	0.125	1.96	0.0618		0.129	U	30
160-43113-3	SAMP	FSS-046-081721	Soil	Th-232	pCi/g	0.428	0.156	0.162	1.96	0.101		0.234		30
160-43113-4	SAMP	FSS-047-081721	Soil	Cs-137	pCi/g	0.190	0.0745	0.077	1.96	0.0282		0.0652		30
160-43113-4	SAMP	FSS-047-081721	Soil	Co-60	pCi/g	0.0328	0.0243	0.0245	1.96	0.0109		0.0345	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	K-40	pCi/g	3.37	0.863	0.927	1.96	0.300		0.727		30
160-43113-4	SAMP	FSS-047-081721	Soil	Na-22	pCi/g	0.0362	0.0251	0.0253	1.96	0.0105		0.0334		30
160-43113-4	SAMP	FSS-047-081721	Soil	Zn-65	pCi/g	-0.00449	0.140	0.140	1.96	0.120	U	0.261	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Ra-226	pCi/g	0.408	0.123	0.130	1.96	0.0513		0.118		30
160-43113-4	SAMP	FSS-047-081721	Soil	Ac-228	pCi/g	0.333	0.155	0.158	1.96	0.105		0.243		30
160-43113-4	SAMP	FSS-047-081721	Soil	Eu-155	pCi/g	0.0434	0.135	0.135	1.96	0.159	U	0.330	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Am-241	pCi/g	-0.00436	0.160	0.160	1.96	0.134	U	0.279	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Eu-152	pCi/g	0.0324	0.110	0.110	1.96	0.0904	U	0.190	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Bi-214	pCi/g	0.408	0.123	0.130	1.96	0.0513		0.118		30
160-43113-4	SAMP	FSS-047-081721	Soil	Bi-212	pCi/g	0.0261	0.570	0.570	1.96	0.476	U	1.06	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Pb-214	pCi/g	0.382	0.107	0.114	1.96	0.0432		0.0989		30

160-43113-4	SAMP	FSS-047-081721	Soil	Pb-212	pCi/g	0.407	0.0852	0.0996	1.96	0.0413		0.091		30
160-43113-4	SAMP	FSS-047-081721	Soil	Eu-154	pCi/g	0.0346	0.0787	0.0788	1.96	0.0645	U	0.135	U	30
160-43113-4	SAMP	FSS-047-081721	Soil	Th-232	pCi/g	0.333	0.155	0.158	1.96	0.105		0.243		30
160-43113-5	SAMP	FSS-048-081721	Soil	Cs-137	pCi/g	0.0256	0.0445	0.0445	1.96	0.0351	U	0.0766	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Co-60	pCi/g	-0.0186	0.0563	0.0564	1.96	0.0274	U	0.0643	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	K-40	pCi/g	2.64	0.665	0.716	1.96	0.235		0.567		30
160-43113-5	SAMP	FSS-048-081721	Soil	Na-22	pCi/g	0.027	0.0187	0.0189	1.96	0.0079		0.0249		30
160-43113-5	SAMP	FSS-048-081721	Soil	Zn-65	pCi/g	-0.0176	0.103	0.103	1.96	0.0849	U	0.186	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Ra-226	pCi/g	0.162	0.0682	0.0701	1.96	0.0346		0.0805		30
160-43113-5	SAMP	FSS-048-081721	Soil	Ac-228	pCi/g	0.336	0.0945	0.100	1.96	0.0465		0.117		30
160-43113-5	SAMP	FSS-048-081721	Soil	Eu-155	pCi/g	0.0206	0.0702	0.0702	1.96	0.209	U	0.426	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Am-241	pCi/g	0.0470	0.108	0.108	1.96	0.0884	U	0.184	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Eu-152	pCi/g	0.0188	0.0488	0.0488	1.96	0.0597	U	0.126	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Bi-214	pCi/g	0.162	0.0682	0.0701	1.96	0.0346		0.0805		30
160-43113-5	SAMP	FSS-048-081721	Soil	Bi-212	pCi/g	0.0288	0.434	0.434	1.96	0.362	U	0.802	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Pb-214	pCi/g	0.208	0.0891	0.0916	1.96	0.0600		0.129		30
160-43113-5	SAMP	FSS-048-081721	Soil	Pb-212	pCi/g	0.254	0.064	0.0717	1.96	0.0365		0.0792		30
160-43113-5	SAMP	FSS-048-081721	Soil	Eu-154	pCi/g	0.0538	0.0863	0.0865	1.96	0.0364		0.0774	U	30
160-43113-5	SAMP	FSS-048-081721	Soil	Th-232	pCi/g	0.336	0.0945	0.100	1.96	0.0465		0.117		30
160-43113-6	SAMP	FSS-049-081721	Soil	Cs-137	pCi/g	0.0266	0.0497	0.0498	1.96	0.0396	U	0.0858	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Co-60	pCi/g	0.00121	0.04	0.04	1.96	0.0201	U	0.0501	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	K-40	pCi/g	2.05	0.616	0.649	1.96	0.245		0.589		30
160-43113-6	SAMP	FSS-049-081721	Soil	Na-22	pCi/g	-0.00351	0.0407	0.0407	1.96	0.0337	U	0.0769	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Zn-65	pCi/g	0.00	0.0173	0.0173	1.96	0.0859	U	0.189	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Ra-226	pCi/g	0.381	0.0890	0.0970	1.96	0.0323		0.0763		30
160-43113-6	SAMP	FSS-049-081721	Soil	Ac-228	pCi/g	0.436	0.125	0.132	1.96	0.0216		0.0683		30
160-43113-6	SAMP	FSS-049-081721	Soil	Eu-155	pCi/g	0.0244	0.0886	0.0886	1.96	0.175	U	0.359	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Am-241	pCi/g	0.0250	0.101	0.102	1.96	0.0636	U	0.135	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Eu-152	pCi/g	0.0609	0.162	0.162	1.96	0.0635	U	0.134	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Bi-214	pCi/g	0.381	0.089	0.097	1.96	0.0323		0.0763		30
160-43113-6	SAMP	FSS-049-081721	Soil	Bi-212	pCi/g	0.167	0.404	0.404	1.96	0.319	U	0.719	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Pb-214	pCi/g	0.410	0.0917	0.101	1.96	0.0339		0.0775		30
160-43113-6	SAMP	FSS-049-081721	Soil	Pb-212	pCi/g	0.388	0.0707	0.0861	1.96	0.0323		0.0709		30
160-43113-6	SAMP	FSS-049-081721	Soil	Eu-154	pCi/g	0.0491	0.0788	0.0790	1.96	0.0393		0.0833	U	30
160-43113-6	SAMP	FSS-049-081721	Soil	Th-232	pCi/g	0.436	0.125	0.132	1.96	0.0216		0.0683		30
160-43113-7	SAMP	FSS-050-081721	Soil	Cs-137	pCi/g	0.0138	0.0276	0.0276	1.96	0.0213	U	0.0486	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Co-60	pCi/g	0.00426	0.0357	0.0357	1.96	0.0177	U	0.0441	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	K-40	pCi/g	2.35	0.756	0.792	1.96	0.260		0.608		30
160-43113-7	SAMP	FSS-050-081721	Soil	Na-22	pCi/g	-0.00412	0.0483	0.0483	1.96	0.0242	U	0.0568	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Zn-65	pCi/g	0.0369	0.0736	0.0737	1.96	0.0572	U	0.129	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Ra-226	pCi/g	0.0372	0.066	0.0661	1.96	0.0728	U	0.156	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Ac-228	pCi/g	0.223	0.0694	0.0729	1.96	0.0426		0.107		30
160-43113-7	SAMP	FSS-050-081721	Soil	Eu-155	pCi/g	0.0198	0.0732	0.0732	1.96	0.144	U	0.296	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Am-241	pCi/g	0.0357	0.0788	0.0789	1.96	0.0643	U	0.136	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Eu-152	pCi/g	0.0920	0.146	0.147	1.96	0.117	U	0.246	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Bi-214	pCi/g	0.0372	0.0660	0.0661	1.96	0.0728	U	0.156	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Bi-212	pCi/g	0.211	0.345	0.346	1.96	0.263	U	0.598	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Pb-214	pCi/g	0.179	0.0572	0.0601	1.96	0.0556		0.120		30
160-43113-7	SAMP	FSS-050-081721	Soil	Pb-212	pCi/g	0.277	0.0587	0.0684	1.96	0.0298		0.0651		30
160-43113-7	SAMP	FSS-050-081721	Soil	Eu-154	pCi/g	0.034	0.0639	0.064	1.96	0.0356	U	0.0753	U	30
160-43113-7	SAMP	FSS-050-081721	Soil	Th-232	pCi/g	0.223	0.0694	0.0729	1.96	0.0426		0.107		30
160-43113-8	SAMP	FSS-051-081721	Soil	Cs-137	pCi/g	0.0267	0.0502	0.0503	1.96	0.0389	U	0.0876	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Co-60	pCi/g	-0.00223	0.00994	0.00994	1.96	0.0397	U	0.0935	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	K-40	pCi/g	2.29	0.792	0.824	1.96	0.334		0.810		30
160-43113-8	SAMP	FSS-051-081721	Soil	Na-22	pCi/g	-0.0302	0.0609	0.0610	1.96	0.0470	U	0.108	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Zn-65	pCi/g	-0.005	0.0932	0.0932	1.96	0.0563	U	0.137	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Ra-226	pCi/g	0.274	0.110	0.113	1.96	0.0465		0.110		30
160-43113-8	SAMP	FSS-051-081721	Soil	Ac-228	pCi/g	0.140	0.219	0.219	1.96	0.135		0.307	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Eu-155	pCi/g	-0.0051	0.236	0.236	1.96	0.199	U	0.411	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Am-241	pCi/g	-0.0723	0.193	0.193	1.96	0.160	U	0.330	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Eu-152	pCi/g	0.109	0.0854	0.0861	1.96	0.0772		0.164	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Bi-214	pCi/g	0.274	0.110	0.113	1.96	0.0465		0.110		30
160-43113-8	SAMP	FSS-051-081721	Soil	Bi-212	pCi/g	1.04	0.418	0.431	1.96	0.101		0.321		30

160-43113-8	SAMP	FSS-051-081721	Soil	Pb-214	pCi/g	0.267	0.0845	0.0887	1.96	0.0428		0.0996		30
160-43113-8	SAMP	FSS-051-081721	Soil	Pb-212	pCi/g	0.0188	0.0933	0.0934	1.96	0.0770	U	0.163	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Eu-154	pCi/g	0.0128	0.0165	0.0166	1.96	0.0658	U	0.138	U	30
160-43113-8	SAMP	FSS-051-081721	Soil	Th-232	pCi/g	0.140	0.219	0.219	1.96	0.135		0.307	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Cs-137	pCi/g	-0.00027	0.061	0.061	1.96	0.0487	U	0.106	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Co-60	pCi/g	0.0289	0.051	0.0511	1.96	0.0240		0.0601	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	K-40	pCi/g	2.23	0.711	0.746	1.96	0.286		0.693		30
160-43113-9	SAMP	FSS-052-081721	Soil	Na-22	pCi/g	-0.0187	0.058	0.058	1.96	0.0464	U	0.105	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Zn-65	pCi/g	-0.00428	0.0473	0.0473	1.96	0.0957	U	0.212	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Ra-226	pCi/g	0.335	0.106	0.111	1.96	0.0405		0.0955		30
160-43113-9	SAMP	FSS-052-081721	Soil	Ac-228	pCi/g	0.655	0.17	0.182	1.96	0.0268		0.0847		30
160-43113-9	SAMP	FSS-052-081721	Soil	Eu-155	pCi/g	-0.0572	0.137	0.137	1.96	0.159	U	0.328	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Am-241	pCi/g	-0.0628	0.154	0.154	1.96	0.127	U	0.263	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Eu-152	pCi/g	0.0418	0.091	0.0911	1.96	0.0809	U	0.170	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Bi-214	pCi/g	0.335	0.106	0.111	1.96	0.0405		0.0955		30
160-43113-9	SAMP	FSS-052-081721	Soil	Bi-212	pCi/g	0.326	0.609	0.609	1.96	0.478	U	1.06	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Pb-214	pCi/g	0.252	0.0776	0.0817	1.96	0.0272		0.0664		30
160-43113-9	SAMP	FSS-052-081721	Soil	Pb-212	pCi/g	0.535	0.0894	0.112	1.96	0.0370		0.0820		30
160-43113-9	SAMP	FSS-052-081721	Soil	Eu-154	pCi/g	0.0264	0.0471	0.0471	1.96	0.0595	U	0.125	U	30
160-43113-9	SAMP	FSS-052-081721	Soil	Th-232	pCi/g	0.655	0.170	0.182	1.96	0.0268		0.0847		30
LCS 160-523941/2-A	QC_LCS	LCS 160-523941/2-A	Soil	Cs-137	pCi/g	25.75	0.615	2.70	1.96	0.0833		0.176		30
LCS 160-523941/2-A	QC_LCS	LCS 160-523941/2-A	Soil	Co-60	pCi/g	8.493	0.292	0.885	1.96	0.0418		0.0976		30
LCS 160-523941/2-A	QC_LCS	LCS 160-523941/2-A	Soil	Am-241	pCi/g	95.05	1.55	9.79	1.96	0.5612		1.13		30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Cs-137	pCi/g	-0.02273	0.0431	0.0432	1.96	0.0334	U	0.0755	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Co-60	pCi/g	-0.02502	0.0756	0.0757	1.96	0.0368	U	0.0863	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	K-40	pCi/g	0.09465	0.564	0.564	1.96	0.270	U	0.668	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Na-22	pCi/g	0.02264	0.0198	0.0200	1.96	0.0106		0.0334	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Zn-65	pCi/g	0.00	0.0446	0.0446	1.96	0.0650	U	0.152	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Ra-226	pCi/g	0.08958	0.0664	0.0670	1.96	0.0477		0.110	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Ac-228	pCi/g	0.07395	0.131	0.131	1.96	0.0625		0.157	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Eu-155	pCi/g	0.01861	0.0625	0.0625	1.96	0.132	U	0.275	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Am-241	pCi/g	-0.04487	0.0995	0.0996	1.96	0.0808	U	0.172	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Eu-152	pCi/g	0.09588	0.0703	0.0710	1.96	0.125	U	0.267	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Bi-214	pCi/g	0.08958	0.0664	0.0670	1.96	0.0477		0.110	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Bi-212	pCi/g	0.00	0.0759	0.0759	1.96	0.255	U	0.616	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Pb-214	pCi/g	-0.0026	0.0847	0.0847	1.96	0.0702	U	0.153	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Pb-212	pCi/g	0.01478	0.0608	0.0609	1.96	0.0499	U	0.108	U	30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Eu-154	pCi/g	0.1057	0.0488	0.0500	1.96	0.0409		0.088		30
MB 160-523941/1-A	QC_BLK	MB 160-523941/1-A	Soil	Th-232	pCi/g	0.07395	0.131	0.131	1.96	0.0625		0.157	U	30
160-43113-1	SAMP	FSS-044-081721	Soil	Ni-63	pCi/g	1.11	0.884	0.891	1.96	0.714		1.49	U	60
160-43113-10	SAMP	FSS-053-081721	Soil	Ni-63	pCi/g	0.705	0.900	0.902	1.96	0.734	U	1.53	U	60
160-43113-11	SAMP	FSS-054-081721	Soil	Ni-63	pCi/g	1.16	0.875	0.883	1.96	0.696		1.45	U	60
160-43113-12	SAMP	FSS-055-081721	Soil	Ni-63	pCi/g	0.434	0.837	0.838	1.96	0.689	U	1.44	U	60
160-43113-13	SAMP	FSS-056-081721	Soil	Ni-63	pCi/g	1.15	0.881	0.888	1.96	0.702		1.47	U	60
160-43113-13 DU	QC_DUP	160-43113-13 DU	Soil	Ni-63	pCi/g	0.7118	0.811	0.815	1.96	0.651		1.36	U	60
160-43113-14	SAMP	FSS-256-081721	Soil	Ni-63	pCi/g	0.328	0.893	0.894	1.96	0.750	U	1.57	U	60
160-43113-15	SAMP	FSS-057-081721	Soil	Ni-63	pCi/g	0.863	0.880	0.884	1.96	0.710		1.48	U	60
160-43113-16	SAMP	FSS-257-081721	Soil	Ni-63	pCi/g	0.611	0.853	0.855	1.96	0.692	U	1.44	U	60
160-43113-17	SAMP	FSS-058-081721	Soil	Ni-63	pCi/g	0.740	0.802	0.806	1.96	0.648		1.35	U	60
160-43113-18	SAMP	FSS-258-081721	Soil	Ni-63	pCi/g	0.290	0.866	0.867	1.96	0.721	U	1.50	U	60
160-43113-2	SAMP	FSS-045-081721	Soil	Ni-63	pCi/g	0.949	0.899	0.904	1.96	0.723		1.51	U	60
160-43113-3	SAMP	FSS-046-081721	Soil	Ni-63	pCi/g	13.00000	1.24	1.81	1.96	0.650		1.36		60
160-43113-4	SAMP	FSS-047-081721	Soil	Ni-63	pCi/g	0.540	0.858	0.86	1.96	0.708	U	1.48	U	60
160-43113-5	SAMP	FSS-048-081721	Soil	Ni-63	pCi/g	0.890	0.953	0.958	1.96	0.780		1.63	U	60
160-43113-6	SAMP	FSS-049-081721	Soil	Ni-63	pCi/g	0.337	0.900	0.901	1.96	0.758	U	1.58	U	60
160-43113-7	SAMP	FSS-050-081721	Soil	Ni-63	pCi/g	0.824	0.851	0.855	1.96	0.689		1.44	U	60
160-43113-8	SAMP	FSS-051-081721	Soil	Ni-63	pCi/g	-0.340	0.817	0.818	1.96	0.707	U	1.48	U	60
160-43113-9	SAMP	FSS-052-081721	Soil	Ni-63	pCi/g	0.321	0.846	0.846	1.96	0.722	U	1.51	U	60
LCS 160-526025/2-A	QC_LCS	LCS 160-526025/2-A	Soil	Ni-63	pCi/g	18.81	1.46	2.41	1.96	0.694		1.45		60
MB 160-526025/1-A	QC_BLK	MB 160-526025/1-A	Soil	Ni-63	pCi/g	1.18	0.883	0.891	1.96	0.707		1.48	U	60
160-43113-1	SAMP	FSS-044-081721	Soil	Pu-241	pCi/g	-4.47	1.95	1.99	1.96	1.83	U	3.82	U	60
160-43113-10	SAMP	FSS-053-081721	Soil	Pu-241	pCi/g	0.553	1.47	1.47	1.96	1.21	U	2.55	U	60
160-43113-11	SAMP	FSS-054-081721	Soil	Pu-241	pCi/g	-0.367	1.23	1.23	1.96	1.06	U	2.23	U	60

160-43113-12	SAMP	FSS-055-081721	Soil	Pu-241	pCi/g	-0.650	1.34	1.34	1.96	1.15	U	2.41	U	60
160-43113-13	SAMP	FSS-056-081721	Soil	Pu-241	pCi/g	0.285	1.62	1.62	1.96	1.34	U	2.81	U	60
160-43113-14	SAMP	FSS-256-081721	Soil	Pu-241	pCi/g	1.82	1.68	1.68	1.96	1.34		2.81	U	60
160-43113-15	SAMP	FSS-057-081721	Soil	Pu-241	pCi/g	1.79	1.67	1.67	1.96	1.34		2.81	U	60
160-43113-16	SAMP	FSS-257-081721	Soil	Pu-241	pCi/g	0.00	1.56	1.56	1.96	1.31	U	2.74	U	60
160-43113-17	SAMP	FSS-058-081721	Soil	Pu-241	pCi/g	1.30	1.94	1.94	1.96	1.57	U	3.30	U	60
160-43113-18	SAMP	FSS-258-081721	Soil	Pu-241	pCi/g	1.79	1.91	1.91	1.96	1.53		3.21	U	60
160-43113-2	SAMP	FSS-045-081721	Soil	Pu-241	pCi/g	-0.293	1.51	1.51	1.96	1.27	U	2.65	U	60
160-43113-3	SAMP	FSS-046-081721	Soil	Pu-241	pCi/g	-1.92	1.76	1.77	1.96	1.52	U	3.19	U	60
160-43113-4	SAMP	FSS-047-081721	Soil	Pu-241	pCi/g	-1.59	1.35	1.35	1.96	1.20	U	2.51	U	60
160-43113-5	SAMP	FSS-048-081721	Soil	Pu-241	pCi/g	-0.788	1.81	1.81	1.96	1.57	U	3.30	U	60
160-43113-6	SAMP	FSS-049-081721	Soil	Pu-241	pCi/g	-2.09	1.27	1.28	1.96	1.13	U	2.36	U	60
160-43113-7	SAMP	FSS-050-081721	Soil	Pu-241	pCi/g	-1.88	1.67	1.67	1.96	1.48	U	3.11	U	60
160-43113-8	SAMP	FSS-051-081721	Soil	Pu-241	pCi/g	-1.87	2.08	2.09	1.96	1.87	U	3.92	U	60
160-43113-9	SAMP	FSS-052-081721	Soil	Pu-241	pCi/g	-0.616	1.17	1.17	1.96	1.01	U	2.11	U	60
LCS 160-524625/2-A	QC_LCS	LCS 160-524625/2-A	Soil	Pu-241	pCi/g	21.72	3.13	3.67	1.96	1.84		3.85		60
LCS 160-525000/2-A	QC_LCS	LCS 160-525000/2-A	Soil	Pu-241	pCi/g	19.34	1.87	2.53	1.96	0.933		1.96		60
MB 160-524625/1-A	QC_BLK	MB 160-524625/1-A	Soil	Pu-241	pCi/g	-0.9155	1.61	1.61	1.96	1.39	U	2.91	U	60
MB 160-525000/1-A	QC_BLK	MB 160-525000/1-A	Soil	Pu-241	pCi/g	-0.2839	1.08	1.08	1.96	0.93	U	1.94	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43124-1	SAMP	FSS-059-081821	Soil	Sr-90	pCi/g	0.377	0.205	0.208	1.96	0.146		0.317		200
160-43124-1 DU	QC_DUP	160-43124-1 DU	Soil	Sr-90	pCi/g	0.003469	0.182	0.182	1.96	0.153	U	0.332	U	200
160-43124-10	SAMP	HFBR-021-061821	Soil	Sr-90	pCi/g	-0.0245	0.147	0.148	1.96	0.126	U	0.276	U	200
160-43124-11	SAMP	FSS-065-081821	Soil	Sr-90	pCi/g	0.150	0.171	0.171	1.96	0.130		0.287	U	200
160-43124-12	SAMP	FSS-066-081821	Soil	Sr-90	pCi/g	0.139	0.193	0.193	1.96	0.152	U	0.328	U	200
160-43124-13	SAMP	FSS-181-081821	Soil	Sr-90	pCi/g	0.182	0.167	0.168	1.96	0.126		0.275	U	200
160-43124-14	SAMP	FSS-067-081821	Soil	Sr-90	pCi/g	0.407	0.229	0.231	1.96	0.165		0.356		200
160-43124-15	SAMP	FSS-068-081821	Soil	Sr-90	pCi/g	0.00626	0.195	0.195	1.96	0.163	U	0.358	U	200
160-43124-16	SAMP	FSS-069-081821	Soil	Sr-90	pCi/g	0.170	0.185	0.186	1.96	0.142		0.311	U	200
160-43124-17	SAMP	FSS-070-081821	Soil	Sr-90	pCi/g	0.113	0.176	0.176	1.96	0.139	U	0.303	U	200
160-43124-18	SAMP	FSS-071-081821	Soil	Sr-90	pCi/g	0.275	0.171	0.172	1.96	0.121		0.266		200
160-43124-19	SAMP	FSS-072-081821	Soil	Sr-90	pCi/g	0.106	0.162	0.162	1.96	0.127	U	0.277	U	200
160-43124-2	SAMP	FSS-259-081821	Soil	Sr-90	pCi/g	0.377	0.175	0.177	1.96	0.117		0.257		200
160-43124-20	SAMP	FSS-073-081821	Soil	Sr-90	pCi/g	-0.0075	0.167	0.167	1.96	0.141	U	0.310	U	200
160-43124-21	SAMP	FSS-074-081821	Soil	Sr-90	pCi/g	0.0339	0.177	0.177	1.96	0.146	U	0.317	U	200
160-43124-21 DU	QC_DUP	160-43124-21 DU	Soil	Sr-90	pCi/g	0.01645	0.216	0.216	1.96	0.180	U	0.387	U	200
160-43124-22	SAMP	FSS-075-081821	Soil	Sr-90	pCi/g	0.0936	0.210	0.210	1.96	0.170	U	0.366	U	200
160-43124-23	SAMP	FSS-076-081821	Soil	Sr-90	pCi/g	0.258	0.201	0.202	1.96	0.150		0.326	U	200
160-43124-24	SAMP	FSS-077-081821	Soil	Sr-90	pCi/g	-0.136	0.195	0.195	1.96	0.173	U	0.372	U	200
160-43124-25	SAMP	FSS-078-081821	Soil	Sr-90	pCi/g	0.109	0.172	0.172	1.96	0.136	U	0.297	U	200
160-43124-26	SAMP	FSS-079-081821	Soil	Sr-90	pCi/g	-0.0808	0.162	0.162	1.96	0.143	U	0.311	U	200
160-43124-27	SAMP	FSS-279-081821	Soil	Sr-90	pCi/g	0.0786	0.189	0.190	1.96	0.153	U	0.333	U	200
160-43124-28	SAMP	FSS-080-081821	Soil	Sr-90	pCi/g	0.173	0.209	0.210	1.96	0.163		0.354	U	200
160-43124-29	SAMP	FSS-280-081821	Soil	Sr-90	pCi/g	-0.111	0.155	0.155	1.96	0.140	U	0.305	U	200
160-43124-3	SAMP	FSS-060-081821	Soil	Sr-90	pCi/g	0.0823	0.164	0.164	1.96	0.131	U	0.286	U	200
160-43124-30	SAMP	FSS-081-081821	Soil	Sr-90	pCi/g	0.190	0.207	0.208	1.96	0.159		0.347	U	200
160-43124-31	SAMP	FSS-281-081821	Soil	Sr-90	pCi/g	-0.140	0.171	0.171	1.96	0.155	U	0.336	U	200
160-43124-4	SAMP	FSS-260-081821	Soil	Sr-90	pCi/g	0.105	0.163	0.163	1.96	0.128	U	0.281	U	200
160-43124-5	SAMP	FSS-061-081821	Soil	Sr-90	pCi/g	0.302	0.187	0.189	1.96	0.136		0.294		200
160-43124-6	SAMP	FSS-261-081821	Soil	Sr-90	pCi/g	0.0776	0.162	0.162	1.96	0.130	U	0.283	U	200
160-43124-7	SAMP	FSS-062-081821	Soil	Sr-90	pCi/g	0.0148	0.190	0.190	1.96	0.159	U	0.345	U	200
160-43124-8	SAMP	FSS-063-081821	Soil	Sr-90	pCi/g	0.180	0.186	0.186	1.96	0.143		0.310	U	200
160-43124-9	SAMP	FSS-064-081821	Soil	Sr-90	pCi/g	0.037	0.172	0.172	1.96	0.142	U	0.307	U	200
LCS 160-527607/2-A	QC_LCS	LCS 160-527607/2-A	Soil	Sr-90	pCi/g	7.718	0.509	0.803	1.96	0.129		0.281		200
LCS 160-527608/2-A	QC_LCS	LCS 160-527608/2-A	Soil	Sr-90	pCi/g	5.622	0.398	0.602	1.96	0.104		0.228		200
MB 160-527607/1-A	QC_BLK	MB 160-527607/1-A	Soil	Sr-90	pCi/g	0.3002	0.202	0.203	1.96	0.149		0.322	U	200
MB 160-527608/1-A	QC_BLK	MB 160-527608/1-A	Soil	Sr-90	pCi/g	0.1314	0.174	0.175	1.96	0.136	U	0.296	U	200
160-43124-1	SAMP	FSS-059-081821	Soil	H-3	pCi/g	0.0674	0.240	0.240	1.96	0.197	U	0.425	U	20
160-43124-10	SAMP	HFBR-021-061821	Soil	H-3	pCi/g	0.0843	0.243	0.243	1.96	0.199	U	0.429	U	20
160-43124-11	SAMP	FSS-065-081821	Soil	H-3	pCi/g	0.0304	0.246	0.246	1.96	0.207	U	0.446	U	20
160-43124-12	SAMP	FSS-066-081821	Soil	H-3	pCi/g	0.00	0.234	0.234	1.96	0.197	U	0.426	U	20
160-43124-13	SAMP	FSS-181-081821	Soil	H-3	pCi/g	-0.128	0.228	0.229	1.96	0.203	U	0.438	U	20
160-43124-14	SAMP	FSS-067-081821	Soil	H-3	pCi/g	-0.154	0.214	0.214	1.96	0.191	U	0.413	U	20
160-43124-15	SAMP	FSS-068-081821	Soil	H-3	pCi/g	0.00	0.243	0.243	1.96	0.207	U	0.446	U	20
160-43124-16	SAMP	FSS-069-081821	Soil	H-3	pCi/g	-0.085	0.24	0.241	1.96	0.213	U	0.461	U	20
160-43124-17	SAMP	FSS-070-081821	Soil	H-3	pCi/g	0.0423	0.235	0.235	1.96	0.195	U	0.420	U	20
160-43124-18	SAMP	FSS-071-081821	Soil	H-3	pCi/g	-0.00604	0.248	0.248	1.96	0.214	U	0.461	U	20
160-43124-18 MS	QC_MS	160-43124-18 MS	Soil	H-3	pCi/g	7.482	0.620	0.895	1.96	0.212		0.458		20
160-43124-19	SAMP	FSS-072-081821	Soil	H-3	pCi/g	-0.151	0.225	0.225	1.96	0.201	U	0.434	U	20
160-43124-19 DU	QC_DUP	160-43124-19 DU	Soil	H-3	pCi/g	-0.2088	0.218	0.219	1.96	0.200	U	0.432	U	20
160-43124-2	SAMP	FSS-259-081821	Soil	H-3	pCi/g	-0.118	0.230	0.230	1.96	0.204	U	0.441	U	20
160-43124-20	SAMP	FSS-073-081821	Soil	H-3	pCi/g	0.0689	0.238	0.238	1.96	0.193	U	0.421	U	20
160-43124-21	SAMP	FSS-074-081821	Soil	H-3	pCi/g	0.0955	0.219	0.219	1.96	0.172	U	0.375	U	20
160-43124-22	SAMP	FSS-075-081821	Soil	H-3	pCi/g	0.0358	0.214	0.214	1.96	0.173	U	0.377	U	20
160-43124-23	SAMP	FSS-076-081821	Soil	H-3	pCi/g	0.131	0.230	0.230	1.96	0.180	U	0.394	U	20
160-43124-24	SAMP	FSS-077-081821	Soil	H-3	pCi/g	0.102	0.225	0.225	1.96	0.177	U	0.387	U	20
160-43124-25	SAMP	FSS-078-081821	Soil	H-3	pCi/g	0.0854	0.221	0.221	1.96	0.174	U	0.380	U	20
160-43124-26	SAMP	FSS-079-081821	Soil	H-3	pCi/g	0.0159	0.215	0.215	1.96	0.174	U	0.380	U	20
160-43124-27	SAMP	FSS-279-081821	Soil	H-3	pCi/g	0.0494	0.228	0.228	1.96	0.185	U	0.403	U	20
160-43124-28	SAMP	FSS-080-081821	Soil	H-3	pCi/g	0.131	0.239	0.239	1.96	0.188	U	0.411	U	20
160-43124-29	SAMP	FSS-280-081821	Soil	H-3	pCi/g	0.0429	0.221	0.221	1.96	0.178	U	0.388	U	20
160-43124-3	SAMP	FSS-060-081821	Soil	H-3	pCi/g	-0.224	0.215	0.216	1.96	0.199	U	0.430	U	20

160-43124-30	SAMP	FSS-081-081821	Soil	H-3	pCi/g	-0.0401	0.213	0.213	1.96	0.178	U	0.389	U	20
160-43124-30 MS	QC_MS	160-43124-30 MS	Soil	H-3	pCi/g	6.76	0.564	0.811	1.96	0.174		0.380		20
160-43124-31	SAMP	FSS-281-081821	Soil	H-3	pCi/g	0.0902	0.218	0.218	1.96	0.171	U	0.374	U	20
160-43124-31 DU	QC_DUP	160-43124-31 DU	Soil	H-3	pCi/g	0.210	0.235	0.236	1.96	0.178		0.389	U	20
160-43124-4	SAMP	FSS-260-081821	Soil	H-3	pCi/g	-0.279	0.213	0.215	1.96	0.201	U	0.433	U	20
160-43124-5	SAMP	FSS-061-081821	Soil	H-3	pCi/g	-0.150	0.232	0.232	1.96	0.209	U	0.452	U	20
160-43124-6	SAMP	FSS-261-081821	Soil	H-3	pCi/g	0.0241	0.244	0.244	1.96	0.206	U	0.444	U	20
160-43124-7	SAMP	FSS-062-081821	Soil	H-3	pCi/g	-0.108	0.234	0.235	1.96	0.208	U	0.450	U	20
160-43124-8	SAMP	FSS-063-081821	Soil	H-3	pCi/g	0.109	0.258	0.258	1.96	0.214	U	0.462	U	20
160-43124-9	SAMP	FSS-064-081821	Soil	H-3	pCi/g	0.00	0.271	0.271	1.96	0.229	U	0.494	U	20
LCS 160-526077/2-A	QC_LCS	LCS 160-526077/2-A	Soil	H-3	pCi/g	7.556	0.606	0.890	1.96	0.202		0.436		20
LCS 160-526079/2-A	QC_LCS	LCS 160-526079/2-A	Soil	H-3	pCi/g	7.532	0.612	0.893	1.96	0.186		0.405		20
MB 160-526077/1-A	QC_BLK	MB 160-526077/1-A	Soil	H-3	pCi/g	-0.03003	0.234	0.234	1.96	0.200	U	0.433	U	20
MB 160-526079/1-A	QC_BLK	MB 160-526079/1-A	Soil	H-3	pCi/g	0.05405	0.220	0.220	1.96	0.178	U	0.388	U	20
160-43124-1	SAMP	FSS-059-081821	Soil	Pu-238	pCi/g	-0.0161	0.0119	0.012	1.96	0.0224	U	0.0724	U	240
160-43124-1	SAMP	FSS-059-081821	Soil	Pu-239/Pu-240	pCi/g	-0.0023	0.00451	0.00452	1.96	0.00847	U	0.0446	U	240
160-43124-10	SAMP	HFBR-021-061821	Soil	Pu-238	pCi/g	-0.0039	0.00541	0.00542	1.96	0.0102	U	0.0437	U	240
160-43124-10	SAMP	HFBR-021-061821	Soil	Pu-239/Pu-240	pCi/g	0.00781	0.0230	0.0230	1.96	0.0144	U	0.0522	U	240
160-43124-11	SAMP	FSS-065-081821	Soil	Pu-238	pCi/g	0.0137	0.0279	0.028	1.96	0.0161	U	0.0557	U	240
160-43124-11	SAMP	FSS-065-081821	Soil	Pu-239/Pu-240	pCi/g	0.00784	0.0154	0.0154	1.96	0.00721		0.0235	U	240
160-43124-12	SAMP	FSS-066-081821	Soil	Pu-238	pCi/g	0.00396	0.0296	0.0296	1.96	0.0230	U	0.0698	U	240
160-43124-12	SAMP	FSS-066-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00396	0.0182	0.0182	1.96	0.0179	U	0.0595	U	240
160-43124-13	SAMP	FSS-181-081821	Soil	Pu-238	pCi/g	-0.0336	0.0235	0.0237	1.96	0.0333	U	0.0902	U	240
160-43124-13	SAMP	FSS-181-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00988	0.0194	0.0194	1.96	0.0218	U	0.0673	U	240
160-43124-14	SAMP	FSS-067-081821	Soil	Pu-238	pCi/g	-0.00421	0.0193	0.0193	1.96	0.0190	U	0.0632	U	240
160-43124-14	SAMP	FSS-067-081821	Soil	Pu-239/Pu-240	pCi/g	0.0400	0.0372	0.0373	1.96	0.00775		0.0408	U	240
160-43124-15	SAMP	FSS-068-081821	Soil	Pu-238	pCi/g	0.0059	0.0235	0.0235	1.96	0.0162	U	0.0560	U	240
160-43124-15	SAMP	FSS-068-081821	Soil	Pu-239/Pu-240	pCi/g	0.00985	0.0228	0.0229	1.96	0.0125	U	0.0487	U	240
160-43124-16	SAMP	FSS-069-081821	Soil	Pu-238	pCi/g	0.0108	0.0131	0.0131	1.96	0.00529		0.0201	U	600
160-43124-16	SAMP	FSS-069-081821	Soil	Pu-239/Pu-240	pCi/g	0.00120	0.00738	0.00738	1.96	0.00529	U	0.0202	U	600
160-43124-17	SAMP	FSS-070-081821	Soil	Pu-238	pCi/g	-0.00169	0.00332	0.00332	1.96	0.00623	U	0.0328	U	240
160-43124-17	SAMP	FSS-070-081821	Soil	Pu-239/Pu-240	pCi/g	0.0119	0.0191	0.0191	1.96	0.00624		0.0328	U	240
160-43124-18	SAMP	FSS-071-081821	Soil	Pu-238	pCi/g	-0.00188	0.00369	0.00369	1.96	0.00692	U	0.0364	U	240
160-43124-18	SAMP	FSS-071-081821	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00369	0.00369	1.96	0.00693	U	0.0226	U	240
160-43124-19	SAMP	FSS-072-081821	Soil	Pu-238	pCi/g	-0.0202	0.0201	0.0201	1.96	0.0262	U	0.0745	U	240
160-43124-19	SAMP	FSS-072-081821	Soil	Pu-239/Pu-240	pCi/g	-0.0331	0.0153	0.0155	1.96	0.0287	U	0.0795	U	240
160-43124-2	SAMP	FSS-259-081821	Soil	Pu-238	pCi/g	0.00	0.0186	0.0186	1.96	0.0156	U	0.0568	U	240
160-43124-2	SAMP	FSS-259-081821	Soil	Pu-239/Pu-240	pCi/g	0.00639	0.0172	0.0172	1.96	0.00783	U	0.0412	U	240
160-43124-20	SAMP	FSS-073-081821	Soil	Pu-238	pCi/g	-0.00386	0.00535	0.00536	1.96	0.0100	U	0.0432	U	240
160-43124-20	SAMP	FSS-073-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00386	0.00535	0.00536	1.96	0.0100	U	0.0433	U	240
160-43124-21	SAMP	FSS-074-081821	Soil	Pu-238	pCi/g	0.000	0.00377	0.00377	1.96	0.00707	U	0.0231	U	240
160-43124-21	SAMP	FSS-074-081821	Soil	Pu-239/Pu-240	pCi/g	0.000	0.00377	0.00377	1.96	0.00708	U	0.0231	U	240
160-43124-22	SAMP	FSS-075-081821	Soil	Pu-238	pCi/g	-0.00207	0.00407	0.00407	1.96	0.00763	U	0.0402	U	240
160-43124-22	SAMP	FSS-075-081821	Soil	Pu-239/Pu-240	pCi/g	0.00831	0.0163	0.0163	1.96	0.00764		0.0249	U	240
160-43124-23	SAMP	FSS-076-081821	Soil	Pu-238	pCi/g	-0.00202	0.00395	0.00396	1.96	0.00742	U	0.0391	U	240
160-43124-23	SAMP	FSS-076-081821	Soil	Pu-239/Pu-240	pCi/g	0.00202	0.0173	0.0173	1.96	0.0129	U	0.0500	U	240
160-43124-24	SAMP	FSS-077-081821	Soil	Pu-238	pCi/g	-0.00603	0.00682	0.00684	1.96	0.0128	U	0.0497	U	240
160-43124-24	SAMP	FSS-077-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00402	0.00558	0.00559	1.96	0.0105	U	0.0451	U	240
160-43124-25	SAMP	FSS-078-081821	Soil	Pu-238	pCi/g	-0.00186	0.00365	0.00366	1.96	0.00686	U	0.0361	U	240
160-43124-25	SAMP	FSS-078-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00187	0.00366	0.00366	1.96	0.00686	U	0.0361	U	240
160-43124-26	SAMP	FSS-079-081821	Soil	Pu-238	pCi/g	0.0149	0.0263	0.0264	1.96	0.0137		0.0498	U	240
160-43124-26	SAMP	FSS-079-081821	Soil	Pu-239/Pu-240	pCi/g	0.00560	0.0151	0.0151	1.96	0.00686	U	0.0361	U	240
160-43124-27	SAMP	FSS-279-081821	Soil	Pu-238	pCi/g	0.0106	0.039	0.039	1.96	0.0277	U	0.0873	U	240
160-43124-27	SAMP	FSS-279-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00266	0.00522	0.00523	1.96	0.00980	U	0.0516	U	240
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	Pu-238	pCi/g	-0.002298	0.0045	0.00451	1.96	0.00845	U	0.0445	U	240
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	Pu-239/Pu-240	pCi/g	-0.0046	0.00638	0.00639	1.96	0.0120	U	0.0515	U	240
160-43124-28	SAMP	FSS-080-081821	Soil	Pu-238	pCi/g	0.0202	0.0280	0.0281	1.96	0.0105		0.0453	U	240
160-43124-28	SAMP	FSS-080-081821	Soil	Pu-239/Pu-240	pCi/g	0.00607	0.0163	0.0164	1.96	0.00744	U	0.0392	U	240
160-43124-29	SAMP	FSS-280-081821	Soil	Pu-238	pCi/g	-0.00477	0.00662	0.00663	1.96	0.0124	U	0.0535	U	240
160-43124-29	SAMP	FSS-280-081821	Soil	Pu-239/Pu-240	pCi/g	0.00956	0.0281	0.0281	1.96	0.0176	U	0.0638	U	240
160-43124-3	SAMP	FSS-060-081821	Soil	Pu-238	pCi/g	0.0238	0.0436	0.0437	1.96	0.0257	U	0.0831	U	240
160-43124-3	SAMP	FSS-060-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00264	0.00518	0.00519	1.96	0.00973	U	0.0512	U	240
160-43124-30	SAMP	FSS-081-081821	Soil	Pu-238	pCi/g	0.00661	0.0263	0.0263	1.96	0.0181	U	0.0627	U	240

160-43124-30	SAMP	FSS-081-081821	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00433	0.00433	1.96	0.00812	U	0.0265	U	240
160-43124-31	SAMP	FSS-281-081821	Soil	Pu-238	pCi/g	-0.00449	0.0285	0.0285	1.96	0.0261	U	0.0792	U	240
160-43124-31	SAMP	FSS-281-081821	Soil	Pu-239/Pu-240	pCi/g	-0.0135	0.0108	0.0108	1.96	0.0202	U	0.0675	U	240
160-43124-4	SAMP	FSS-260-081821	Soil	Pu-238	pCi/g	0.0186	0.0387	0.0387	1.96	0.0252	U	0.0753	U	240
160-43124-4	SAMP	FSS-260-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00414	0.00574	0.00575	1.96	0.0108	U	0.0464	U	240
160-43124-5	SAMP	FSS-061-081821	Soil	Pu-238	pCi/g	0.00612	0.0351	0.0351	1.96	0.0271	U	0.0786	U	240
160-43124-5	SAMP	FSS-061-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00613	0.00693	0.00695	1.96	0.0130	U	0.0505	U	240
160-43124-6	SAMP	FSS-261-081821	Soil	Pu-238	pCi/g	0.0175	0.0364	0.0364	1.96	0.0228	U	0.0718	U	240
160-43124-6	SAMP	FSS-261-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00219	0.0043	0.0043	1.96	0.00806	U	0.0424	U	240
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	Pu-238	pCi/g	0.007388	0.0199	0.0199	1.96	0.00906	U	0.0477	U	240
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	Pu-239/Pu-240	pCi/g	-0.00493	0.00683	0.00684	1.96	0.0128	U	0.0552	U	240
160-43124-7	SAMP	FSS-062-081821	Soil	Pu-238	pCi/g	0.00	0.0231	0.0231	1.96	0.0194	U	0.0612	U	240
160-43124-7	SAMP	FSS-062-081821	Soil	Pu-239/Pu-240	pCi/g	-0.00187	0.00366	0.00366	1.96	0.00687	U	0.0361	U	240
160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	Pu-238	pCi/g	0.005825	0.0157	0.0157	1.96	0.00714	U	0.0376	U	240
160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	Pu-239/Pu-240	pCi/g	-0.003888	0.00539	0.0054	1.96	0.0101	U	0.0435	U	240
160-43124-8	SAMP	FSS-063-081821	Soil	Pu-238	pCi/g	-0.0315	0.0154	0.0157	1.96	0.0290	U	0.0816	U	240
160-43124-8	SAMP	FSS-063-081821	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0299	0.0299	1.96	0.0251	U	0.0739	U	240
160-43124-9	SAMP	FSS-064-081821	Soil	Pu-238	pCi/g	0.0113	0.0215	0.0215	1.96	0.00976		0.0421	U	240
160-43124-9	SAMP	FSS-064-081821	Soil	Pu-239/Pu-240	pCi/g	0.0132	0.0212	0.0212	1.96	0.00691		0.0364	U	240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-238	pCi/g	5.059	0.390	0.571	1.96	0.0161		0.0555		240
LCS 160-524992/2-A	QC_LCS	LCS 160-524992/2-A	Soil	Pu-239/Pu-240	pCi/g	5.285	0.398	0.590	1.96	0.0072		0.0235		240
LCS 160-525614/2-A	QC_LCS	LCS 160-525614/2-A	Soil	Pu-238	pCi/g	5.475	0.395	0.599	1.96	0.0244		0.0709		240
LCS 160-525614/2-A	QC_LCS	LCS 160-525614/2-A	Soil	Pu-239/Pu-240	pCi/g	5.307	0.388	0.584	1.96	0.0117		0.0456		240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-238	pCi/g	5.842	0.462	0.667	1.96	0.0313		0.0909		240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-239/Pu-240	pCi/g	5.786	0.459	0.661	1.96	0.0151		0.0585		240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-238	pCi/g	-0.004118	0.00571	0.00572	1.96	0.0107	U	0.0461	U	240
MB 160-524992/1-A	QC_BLK	MB 160-524992/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.008245	0.00808	0.00811	1.96	0.0152	U	0.0551	U	240
MB 160-525614/1-A	QC_BLK	MB 160-525614/1-A	Soil	Pu-238	pCi/g	0.001858	0.0280	0.0280	1.96	0.0227	U	0.0676	U	240
MB 160-525614/1-A	QC_BLK	MB 160-525614/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.00372	0.00516	0.00516	1.96	0.0097	U	0.0417	U	240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-238	pCi/g	0.001978	0.0298	0.0298	1.96	0.0241	U	0.072	U	240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-239/Pu-240	pCi/g	0.003959	0.0165	0.0165	1.96	0.0103	U	0.0444	U	240
160-43124-1	SAMP	FSS-059-081821	Soil	U-233/U-234	pCi/g	0.0890	0.0924	0.0927	1.96	0.0603		0.15	U	240
160-43124-1	SAMP	FSS-059-081821	Soil	U-235/U-236	pCi/g	-0.00615	0.0391	0.0391	1.96	0.0358	U	0.108	U	240
160-43124-1	SAMP	FSS-059-081821	Soil	U-238	pCi/g	0.187	0.0897	0.0910	1.96	0.0257		0.0809		240
160-43124-10	SAMP	HFBR-021-061821	Soil	U-233/U-234	pCi/g	0.243	0.0905	0.0927	1.96	0.0186		0.0619		240
160-43124-10	SAMP	HFBR-021-061821	Soil	U-235/U-236	pCi/g	0.0179	0.0289	0.0289	1.96	0.00943		0.0496	U	240
160-43124-10	SAMP	HFBR-021-061821	Soil	U-238	pCi/g	0.278	0.0958	0.0985	1.96	0.0169		0.0585		240
160-43124-11	SAMP	FSS-065-081821	Soil	U-233/U-234	pCi/g	0.123	0.0694	0.0701	1.96	0.0273		0.0784		240
160-43124-11	SAMP	FSS-065-081821	Soil	U-235/U-236	pCi/g	-0.00247	0.0222	0.0222	1.96	0.0203	U	0.0702	U	240
160-43124-11	SAMP	FSS-065-081821	Soil	U-238	pCi/g	0.156	0.0695	0.0707	1.96	0.0073		0.0383		240
160-43124-12	SAMP	FSS-066-081821	Soil	U-233/U-234	pCi/g	0.176	0.0741	0.0755	1.96	0.0169		0.0563		240
160-43124-12	SAMP	FSS-066-081821	Soil	U-235/U-236	pCi/g	-0.00234	0.00458	0.00458	1.96	0.00859	U	0.0452	U	240
160-43124-12	SAMP	FSS-066-081821	Soil	U-238	pCi/g	0.249	0.0859	0.0883	1.96	0.0119		0.0463		240
160-43124-13	SAMP	FSS-181-081821	Soil	U-233/U-234	pCi/g	0.234	0.0828	0.085	1.96	0.0162		0.0541		240
160-43124-13	SAMP	FSS-181-081821	Soil	U-235/U-236	pCi/g	0.00672	0.0181	0.0181	1.96	0.00824	U	0.0434	U	240
160-43124-13	SAMP	FSS-181-081821	Soil	U-238	pCi/g	0.180	0.0722	0.0737	1.96	0.0132		0.0480		240
160-43124-14	SAMP	FSS-067-081821	Soil	U-233/U-234	pCi/g	0.230	0.0839	0.086	1.96	0.0101		0.0437		240
160-43124-14	SAMP	FSS-067-081821	Soil	U-235/U-236	pCi/g	0.0291	0.0329	0.033	1.96	0.00892		0.0291		240
160-43124-14	SAMP	FSS-067-081821	Soil	U-238	pCi/g	0.195	0.0763	0.0779	1.96	0.00716		0.0233		240
160-43124-15	SAMP	FSS-068-081821	Soil	U-233/U-234	pCi/g	0.175	0.0749	0.0763	1.96	0.0106		0.0455		240
160-43124-15	SAMP	FSS-068-081821	Soil	U-235/U-236	pCi/g	0.0202	0.0280	0.0281	1.96	0.00930		0.0303	U	240
160-43124-15	SAMP	FSS-068-081821	Soil	U-238	pCi/g	0.162	0.0711	0.0723	1.96	0.00746		0.0243		240
160-43124-16	SAMP	FSS-069-081821	Soil	U-233/U-234	pCi/g	0.258	0.0916	0.094	1.96	0.00771		0.0406		240
160-43124-16	SAMP	FSS-069-081821	Soil	U-235/U-236	pCi/g	0.0287	0.0358	0.0359	1.96	0.00960		0.0505	U	240
160-43124-16	SAMP	FSS-069-081821	Soil	U-238	pCi/g	0.190	0.0809	0.0824	1.96	0.0172		0.0595		240
160-43124-17	SAMP	FSS-070-081821	Soil	U-233/U-234	pCi/g	0.195	0.0789	0.0805	1.96	0.0128		0.0496		240
160-43124-17	SAMP	FSS-070-081821	Soil	U-235/U-236	pCi/g	0.0200	0.0277	0.0277	1.96	0.00918		0.0299	U	240
160-43124-17	SAMP	FSS-070-081821	Soil	U-238	pCi/g	0.214	0.0816	0.0835	1.96	0.00736		0.0387		240
160-43124-18	SAMP	FSS-071-081821	Soil	U-233/U-234	pCi/g	0.135	0.0634	0.0644	1.96	0.0118		0.0457		240
160-43124-18	SAMP	FSS-071-081821	Soil	U-235/U-236	pCi/g	0.0345	0.0363	0.0364	1.96	0.00846		0.0445	U	240
160-43124-18	SAMP	FSS-071-081821	Soil	U-238	pCi/g	0.188	0.0739	0.0755	1.96	0.00959		0.0413		240
160-43124-19	SAMP	FSS-072-081821	Soil	U-233/U-234	pCi/g	0.226	0.0852	0.0872	1.96	0.0244		0.0709		240
160-43124-19	SAMP	FSS-072-081821	Soil	U-235/U-236	pCi/g	0.00229	0.0196	0.0196	1.96	0.0146	U	0.0567	U	240

160-43124-19	SAMP	FSS-072-081821	Soil	U-238	pCi/g	0.237	0.0845	0.0868	1.96	0.0179		0.0578		240
160-43124-2	SAMP	FSS-259-081821	Soil	U-233/U-234	pCi/g	0.144	0.0759	0.0768	1.96	0.0177		0.0641		240
160-43124-2	SAMP	FSS-259-081821	Soil	U-235/U-236	pCi/g	0.0179	0.0341	0.0342	1.96	0.0155		0.0669	U	240
160-43124-2	SAMP	FSS-259-081821	Soil	U-238	pCi/g	0.0863	0.0564	0.0568	1.96	0.00881		0.0288		240
160-43124-20	SAMP	FSS-073-081821	Soil	U-233/U-234	pCi/g	0.105	0.0645	0.0651	1.96	0.0256		0.0754		240
160-43124-20	SAMP	FSS-073-081821	Soil	U-235/U-236	pCi/g	0.0200	0.0278	0.0278	1.96	0.00921		0.0300	U	240
160-43124-20	SAMP	FSS-073-081821	Soil	U-238	pCi/g	0.249	0.0894	0.0917	1.96	0.0148		0.0536		240
160-43124-21	SAMP	FSS-074-081821	Soil	U-233/U-234	pCi/g	0.257	0.0900	0.0924	1.96	0.0127		0.0493		240
160-43124-21	SAMP	FSS-074-081821	Soil	U-235/U-236	pCi/g	0.0173	0.0279	0.0279	1.96	0.00912		0.0480	U	240
160-43124-21	SAMP	FSS-074-081821	Soil	U-238	pCi/g	0.203	0.0797	0.0814	1.96	0.0103		0.0445		240
160-43124-22	SAMP	FSS-075-081821	Soil	U-233/U-234	pCi/g	0.322	0.103	0.106	1.96	0.00784		0.0413		240
160-43124-22	SAMP	FSS-075-081821	Soil	U-235/U-236	pCi/g	0.0106	0.0208	0.0208	1.96	0.00976		0.0318	U	240
160-43124-22	SAMP	FSS-075-081821	Soil	U-238	pCi/g	0.264	0.0947	0.0972	1.96	0.0156		0.0568		240
160-43124-23	SAMP	FSS-076-081821	Soil	U-233/U-234	pCi/g	0.274	0.0908	0.0936	1.96	0.0100		0.0432		240
160-43124-23	SAMP	FSS-076-081821	Soil	U-235/U-236	pCi/g	0.0144	0.0274	0.0274	1.96	0.0125		0.0537	U	240
160-43124-23	SAMP	FSS-076-081821	Soil	U-238	pCi/g	0.212	0.0800	0.0819	1.96	0.0100		0.0431		240
160-43124-24	SAMP	FSS-077-081821	Soil	U-233/U-234	pCi/g	0.337	0.0986	0.102	1.96	0.00964		0.0415		240
160-43124-24	SAMP	FSS-077-081821	Soil	U-235/U-236	pCi/g	0.0161	0.0260	0.026	1.96	0.00848		0.0446	U	240
160-43124-24	SAMP	FSS-077-081821	Soil	U-238	pCi/g	0.229	0.0823	0.0844	1.96	0.0136		0.0494		240
160-43124-25	SAMP	FSS-078-081821	Soil	U-233/U-234	pCi/g	0.275	0.0956	0.0983	1.96	0.0153		0.0557		240
160-43124-25	SAMP	FSS-078-081821	Soil	U-235/U-236	pCi/g	0.0285	0.0356	0.0357	1.96	0.00954		0.0502	U	240
160-43124-25	SAMP	FSS-078-081821	Soil	U-238	pCi/g	0.214	0.0832	0.0851	1.96	0.00765		0.0403		240
160-43124-26	SAMP	FSS-079-081821	Soil	U-233/U-234	pCi/g	0.221	0.0785	0.0806	1.96	0.00661		0.0348		240
160-43124-26	SAMP	FSS-079-081821	Soil	U-235/U-236	pCi/g	-0.00224	0.00438	0.00439	1.96	0.00823	U	0.0433	U	240
160-43124-26	SAMP	FSS-079-081821	Soil	U-238	pCi/g	0.242	0.0821	0.0845	1.96	0.00660		0.0347		240
160-43124-27	SAMP	FSS-279-081821	Soil	U-233/U-234	pCi/g	0.0642	0.0932	0.0934	1.96	0.0653	U	0.163	U	240
160-43124-27	SAMP	FSS-279-081821	Soil	U-235/U-236	pCi/g	-0.0200	0.0333	0.0333	1.96	0.0387	U	0.117	U	240
160-43124-27	SAMP	FSS-279-081821	Soil	U-238	pCi/g	0.224	0.101	0.103	1.96	0.0278		0.0876		240
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	U-233/U-234	pCi/g	0.1762	0.0855	0.0868	1.96	0.0235		0.0759		240
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	U-235/U-236	pCi/g	0.04505	0.0475	0.0476	1.96	0.0110		0.0581	U	240
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	U-238	pCi/g	0.2408	0.0967	0.0988	1.96	0.0177		0.0643		240
160-43124-28	SAMP	FSS-080-081821	Soil	U-233/U-234	pCi/g	0.218	0.0885	0.0903	1.96	0.0210		0.0678		240
160-43124-28	SAMP	FSS-080-081821	Soil	U-235/U-236	pCi/g	0.00537	0.0223	0.0223	1.96	0.0140	U	0.0601	U	240
160-43124-28	SAMP	FSS-080-081821	Soil	U-238	pCi/g	0.237	0.0914	0.0935	1.96	0.0194		0.0646		240
160-43124-29	SAMP	FSS-280-081821	Soil	U-233/U-234	pCi/g	0.183	0.0827	0.0841	1.96	0.0168		0.0611		240
160-43124-29	SAMP	FSS-280-081821	Soil	U-235/U-236	pCi/g	-0.00285	0.00558	0.00559	1.96	0.0105	U	0.0551	U	240
160-43124-29	SAMP	FSS-280-081821	Soil	U-238	pCi/g	0.217	0.0879	0.0897	1.96	0.00840		0.0442		240
160-43124-3	SAMP	FSS-060-081821	Soil	U-233/U-234	pCi/g	0.140	0.0782	0.0791	1.96	0.0169		0.0655		240
160-43124-3	SAMP	FSS-060-081821	Soil	U-235/U-236	pCi/g	0.00	0.00646	0.00646	1.96	0.0121	U	0.0396	U	240
160-43124-3	SAMP	FSS-060-081821	Soil	U-238	pCi/g	0.193	0.0908	0.0922	1.96	0.0168		0.0654		240
160-43124-30	SAMP	FSS-081-081821	Soil	U-233/U-234	pCi/g	0.0416	0.0858	0.0859	1.96	0.0634	U	0.158	U	240
160-43124-30	SAMP	FSS-081-081821	Soil	U-235/U-236	pCi/g	-0.0226	0.0329	0.033	1.96	0.0394	U	0.118	U	240
160-43124-30	SAMP	FSS-081-081821	Soil	U-238	pCi/g	0.0881	0.0693	0.0697	1.96	0.0302		0.0914	U	240
160-43124-31	SAMP	FSS-281-081821	Soil	U-233/U-234	pCi/g	0.205	0.0995	0.101	1.96	0.0345		0.100		240
160-43124-31	SAMP	FSS-281-081821	Soil	U-235/U-236	pCi/g	0.0194	0.0370	0.0370	1.96	0.0168		0.0725	U	240
160-43124-31	SAMP	FSS-281-081821	Soil	U-238	pCi/g	0.221	0.0985	0.100	1.96	0.0253		0.0816		240
160-43124-4	SAMP	FSS-260-081821	Soil	U-233/U-234	pCi/g	0.138	0.0690	0.0699	1.96	0.0081		0.0425		240
160-43124-4	SAMP	FSS-260-081821	Soil	U-235/U-236	pCi/g	0.0082	0.0221	0.0221	1.96	0.0101	U	0.0529	U	240
160-43124-4	SAMP	FSS-260-081821	Soil	U-238	pCi/g	0.121	0.0644	0.0652	1.96	0.00806		0.0424		240
160-43124-5	SAMP	FSS-061-081821	Soil	U-233/U-234	pCi/g	0.119	0.0707	0.0714	1.96	0.0182		0.0662		240
160-43124-5	SAMP	FSS-061-081821	Soil	U-235/U-236	pCi/g	0.00	0.00604	0.00604	1.96	0.0113	U	0.0370	U	240
160-43124-5	SAMP	FSS-061-081821	Soil	U-238	pCi/g	0.178	0.0822	0.0835	1.96	0.00909		0.0297		240
160-43124-6	SAMP	FSS-261-081821	Soil	U-233/U-234	pCi/g	0.372	0.121	0.124	1.96	0.0248		0.0783		240
160-43124-6	SAMP	FSS-261-081821	Soil	U-235/U-236	pCi/g	-0.00297	0.00582	0.00583	1.96	0.0109	U	0.0575	U	240
160-43124-6	SAMP	FSS-261-081821	Soil	U-238	pCi/g	0.248	0.0952	0.0974	1.96	0.00876		0.0286		240
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	U-233/U-234	pCi/g	0.2026	0.0927	0.0942	1.96	0.0168		0.0651		240
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	U-235/U-236	pCi/g	0.01964	0.0374	0.0375	1.96	0.0170		0.0734	U	240
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	U-238	pCi/g	0.1549	0.0799	0.0809	1.96	0.00966		0.0508		240
160-43124-7	SAMP	FSS-062-081821	Soil	U-233/U-234	pCi/g	0.111	0.0596	0.0603	1.96	0.00746		0.0392		240
160-43124-7	SAMP	FSS-062-081821	Soil	U-235/U-236	pCi/g	0.0101	0.0198	0.0198	1.96	0.00928		0.0303	U	240
160-43124-7	SAMP	FSS-062-081821	Soil	U-238	pCi/g	0.115	0.0618	0.0625	1.96	0.0129		0.0501		240
160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	U-233/U-234	pCi/g	0.144	0.0689	0.0699	1.96	0.0197		0.0622		240
160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	U-235/U-236	pCi/g	-0.004717	0.00654	0.00655	1.96	0.0123	U	0.0528	U	240

160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	U-238	pCi/g	0.1854	0.0743	0.0759	1.96	0.00984		0.0424		240
160-43124-8	SAMP	FSS-063-081821	Soil	U-233/U-234	pCi/g	0.323	0.0999	0.103	1.96	0.0159		0.0551		240
160-43124-8	SAMP	FSS-063-081821	Soil	U-235/U-236	pCi/g	0.0120	0.0279	0.0279	1.96	0.0153	U	0.0596	U	240
160-43124-8	SAMP	FSS-063-081821	Soil	U-238	pCi/g	0.234	0.0846	0.0867	1.96	0.0123		0.0478		240
160-43124-9	SAMP	FSS-064-081821	Soil	U-233/U-234	pCi/g	0.399	0.113	0.118	1.96	0.0150		0.0543		240
160-43124-9	SAMP	FSS-064-081821	Soil	U-235/U-236	pCi/g	0.0278	0.0347	0.0348	1.96	0.00931		0.0490	U	240
160-43124-9	SAMP	FSS-064-081821	Soil	U-238	pCi/g	0.258	0.0918	0.0942	1.96	0.0167		0.0577		240
LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-233/U-234	pCi/g	5.631	0.426	0.629	1.96	0.0188		0.0627		240
LCS 160-524999/2-A	QC_LCS	LCS 160-524999/2-A	Soil	U-238	pCi/g	6.623	0.461	0.714	1.96	0.0172		0.0593		240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-233/U-234	pCi/g	6.194	0.442	0.675	1.96	0.00756		0.0398		240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-238	pCi/g	5.982	0.434	0.657	1.96	0.0107		0.0459		240
LCS 160-525623/2-A	QC_LCS	LCS 160-525623/2-A	Soil	U-233/U-234	pCi/g	6.80	0.699	0.895	1.96	0.0565		0.169		240
LCS 160-525623/2-A	QC_LCS	LCS 160-525623/2-A	Soil	U-238	pCi/g	6.81	0.696	0.894	1.96	0.0240		0.104		240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-233/U-234	pCi/g	0.01627	0.0288	0.0288	1.96	0.0150		0.0543	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-235/U-236	pCi/g	0.007594	0.0205	0.0205	1.96	0.00931	U	0.0490	U	240
MB 160-524999/1-A	QC_BLK	MB 160-524999/1-A	Soil	U-238	pCi/g	-0.00203	0.0182	0.0182	1.96	0.0167	U	0.0578	U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-233/U-234	pCi/g	0.01076	0.0313	0.0313	1.96	0.0210	U	0.0677	U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-235/U-236	pCi/g	0.005358	0.0223	0.0223	1.96	0.0139	U	0.0600	U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-238	pCi/g	0.004297	0.0260	0.0260	1.96	0.0194	U	0.0645	U	240
MB 160-525623/1-A	QC_BLK	MB 160-525623/1-A	Soil	U-233/U-234	pCi/g	0.005973	0.0295	0.0295	1.96	0.0220	U	0.0678	U	240
MB 160-525623/1-A	QC_BLK	MB 160-525623/1-A	Soil	U-235/U-236	pCi/g	0.00	0.00486	0.00486	1.96	0.00911	U	0.0297	U	240
MB 160-525623/1-A	QC_BLK	MB 160-525623/1-A	Soil	U-238	pCi/g	0.01987	0.0275	0.0276	1.96	0.0103		0.0445	U	240
160-43124-1	SAMP	FSS-059-081821	Soil	C-14	pCi/g	-0.0223	0.633	0.633	1.96	0.533	U	1.13	U	20
160-43124-1 DU	QC_DUP	160-43124-1 DU	Soil	C-14	pCi/g	0.3708	0.61	0.611	1.96	0.490	U	1.04	U	20
160-43124-1 MS	QC_MS	160-43124-1 MS	Soil	C-14	pCi/g	77.58	2.81	8.68	1.96	0.592		1.26		20
160-43124-10	SAMP	HFBR-021-061821	Soil	C-14	pCi/g	-0.494	0.525	0.528	1.96	0.442	U	0.934	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	C-14	pCi/g	-0.184	0.499	0.499	1.96	0.407	U	0.858	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	C-14	pCi/g	-0.359	0.591	0.592	1.96	0.489	U	1.03	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	C-14	pCi/g	-0.595	0.545	0.548	1.96	0.462	U	0.975	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	C-14	pCi/g	-0.258	0.527	0.528	1.96	0.432	U	0.912	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	C-14	pCi/g	-0.0611	0.530	0.530	1.96	0.425	U	0.897	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	C-14	pCi/g	0.528	0.717	0.719	1.96	0.572	U	1.22	U	20
160-43124-16 DU	QC_DUP	160-43124-16 DU	Soil	C-14	pCi/g	0.2214	0.647	0.648	1.96	0.530	U	1.13	U	20
160-43124-16 MS	QC_MS	160-43124-16 MS	Soil	C-14	pCi/g	51.54	1.90	5.78	1.96	0.395		0.842		20
160-43124-17	SAMP	FSS-070-081821	Soil	C-14	pCi/g	0.0631	0.503	0.503	1.96	0.418	U	0.890	U	20
160-43124-18	SAMP	FSS-071-081821	Soil	C-14	pCi/g	0.0295	0.700	0.700	1.96	0.586	U	1.25	U	20
160-43124-19	SAMP	FSS-072-081821	Soil	C-14	pCi/g	0.0298	0.624	0.624	1.96	0.524	U	1.12	U	20
160-43124-2	SAMP	FSS-259-081821	Soil	C-14	pCi/g	-0.153	0.653	0.654	1.96	0.556	U	1.18	U	20
160-43124-20	SAMP	FSS-073-081821	Soil	C-14	pCi/g	-0.0847	0.728	0.729	1.96	0.615	U	1.31	U	20
160-43124-21	SAMP	FSS-074-081821	Soil	C-14	pCi/g	0.235	0.571	0.571	1.96	0.467	U	0.994	U	20
160-43124-22	SAMP	FSS-075-081821	Soil	C-14	pCi/g	-0.0172	0.568	0.568	1.96	0.477	U	1.02	U	20
160-43124-23	SAMP	FSS-076-081821	Soil	C-14	pCi/g	0.240	0.614	0.614	1.96	0.502	U	1.07	U	20
160-43124-24	SAMP	FSS-077-081821	Soil	C-14	pCi/g	0.147	0.711	0.711	1.96	0.588	U	1.25	U	20
160-43124-25	SAMP	FSS-078-081821	Soil	C-14	pCi/g	0.0631	0.703	0.703	1.96	0.586	U	1.25	U	20
160-43124-26	SAMP	FSS-079-081821	Soil	C-14	pCi/g	0.123	0.716	0.716	1.96	0.594	U	1.26	U	20
160-43124-27	SAMP	FSS-279-081821	Soil	C-14	pCi/g	0.281	0.450	0.451	1.96	0.363	U	0.773	U	20
160-43124-28	SAMP	FSS-080-081821	Soil	C-14	pCi/g	0.257	0.708	0.708	1.96	0.580	U	1.23	U	20
160-43124-29	SAMP	FSS-280-081821	Soil	C-14	pCi/g	0.172	0.774	0.774	1.96	0.641	U	1.36	U	20
160-43124-3	SAMP	FSS-060-081821	Soil	C-14	pCi/g	-0.159	0.650	0.650	1.96	0.555	U	1.18	U	20
160-43124-30	SAMP	FSS-081-081821	Soil	C-14	pCi/g	0.529	0.677	0.680	1.96	0.539	U	1.15	U	20
160-43124-31	SAMP	FSS-281-081821	Soil	C-14	pCi/g	-0.0649	0.615	0.615	1.96	0.520	U	1.11	U	20
160-43124-4	SAMP	FSS-260-081821	Soil	C-14	pCi/g	-0.0684	0.681	0.681	1.96	0.575	U	1.22	U	20
160-43124-5	SAMP	FSS-061-081821	Soil	C-14	pCi/g	0.333	0.711	0.712	1.96	0.578	U	1.23	U	20
160-43124-6	SAMP	FSS-261-081821	Soil	C-14	pCi/g	-0.0957	0.671	0.672	1.96	0.569	U	1.21	U	20
160-43124-7	SAMP	FSS-062-081821	Soil	C-14	pCi/g	-0.0797	0.554	0.554	1.96	0.445	U	0.939	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	C-14	pCi/g	-0.214	0.527	0.527	1.96	0.430	U	0.908	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	C-14	pCi/g	-0.330	0.467	0.469	1.96	0.389	U	0.821	U	30
LCS 160-527261/2-A	QC_LCS	LCS 160-527261/2-A	Soil	C-14	pCi/g	82.32	3.03	9.23	1.96	0.645		1.37		20
LCS 160-527451/2-A	QC_LCS	LCS 160-527451/2-A	Soil	C-14	pCi/g	81.63	2.50	8.99	1.96	0.501		1.06		30
LCS 160-527642/2-A	QC_LCS	LCS 160-527642/2-A	Soil	C-14	pCi/g	83.36	3.04	9.33	1.96	0.625		1.33		20
LCS 160-527842/2-A	QC_LCS	LCS 160-527842/2-A	Soil	C-14	pCi/g	82.72	3.04	9.27	1.96	0.650		1.38		20
MB 160-527261/1-A	QC_BLK	MB 160-527261/1-A	Soil	C-14	pCi/g	-0.3198	0.746	0.747	1.96	0.645	U	1.37	U	20
MB 160-527451/1-A	QC_BLK	MB 160-527451/1-A	Soil	C-14	pCi/g	-0.3874	0.612	0.614	1.96	0.506	U	1.07	U	30

MB 160-527642/1-A	QC_BLK	MB 160-527642/1-A	Soil	C-14	pCi/g	0.4009	0.781	0.782	1.96	0.634	U	1.35	U	20
MB 160-527842/1-A	QC_BLK	MB 160-527842/1-A	Soil	C-14	pCi/g	0.7523	0.826	0.83	1.96	0.652		1.39	U	20
160-43124-1	SAMP	FSS-059-081821	Soil	Cs-137	pCi/g	0.0141	0.0288	0.0288	1.96	0.0220	U	0.0511	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Co-60	pCi/g	-0.0548	0.0889	0.089	1.96	0.0427	U	0.0958	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	K-40	pCi/g	3.95	0.832	0.921	1.96	0.2592		0.624		30
160-43124-1	SAMP	FSS-059-081821	Soil	Na-22	pCi/g	-0.00619	0.0262	0.0262	1.96	0.0206	U	0.0512	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Zn-65	pCi/g	-0.0236	0.115	0.115	1.96	0.0942	U	0.206	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Ra-226	pCi/g	0.199	0.104	0.106	1.96	0.0459		0.104		30
160-43124-1	SAMP	FSS-059-081821	Soil	Ac-228	pCi/g	0.314	0.0949	0.0999	1.96	0.0229		0.0724		30
160-43124-1	SAMP	FSS-059-081821	Soil	Eu-155	pCi/g	0.0227	0.0793	0.0794	1.96	0.209	U	0.427	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Am-241	pCi/g	0.0255	0.122	0.122	1.96	0.101	U	0.211	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Eu-152	pCi/g	0.000872	0.00156	0.00156	1.96	0.0672	U	0.142	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Bi-214	pCi/g	0.199	0.104	0.106	1.96	0.0459		0.104		30
160-43124-1	SAMP	FSS-059-081821	Soil	Bi-212	pCi/g	0.270	0.691	0.692	1.96	0.561	U	1.21	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Pb-214	pCi/g	0.227	0.0792	0.0826	1.96	0.0366		0.0835		30
160-43124-1	SAMP	FSS-059-081821	Soil	Pb-212	pCi/g	0.263	0.0625	0.0708	1.96	0.0313		0.0693		30
160-43124-1	SAMP	FSS-059-081821	Soil	Eu-154	pCi/g	0.0633	0.102	0.102	1.96	0.0460		0.0970	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Th-232	pCi/g	0.314	0.0949	0.0999	1.96	0.0229		0.0724		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Cs-137	pCi/g	0.0328	0.0569	0.057	1.96	0.0452	U	0.0979	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Co-60	pCi/g	0.00416	0.0152	0.0152	1.96	0.0222	U	0.0552	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	K-40	pCi/g	6.05	1.02	1.19	1.96	0.270		0.649		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Na-22	pCi/g	0.0270	0.0324	0.0325	1.96	0.0214		0.0533	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Zn-65	pCi/g	0.0453	0.0942	0.0943	1.96	0.0737	U	0.166	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Ra-226	pCi/g	0.430	0.113	0.121	1.96	0.0586		0.130		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Ac-228	pCi/g	0.347	0.153	0.157	1.96	0.0532		0.134		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Eu-155	pCi/g	-0.000927	0.0903	0.0903	1.96	0.2056	U	0.421	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Am-241	pCi/g	-0.0647	0.0767	0.0770	1.96	0.112	U	0.232	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Eu-152	pCi/g	0.132	0.0628	0.0642	1.96	0.0789		0.165	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Bi-214	pCi/g	0.430	0.113	0.121	1.96	0.0586		0.130		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Bi-212	pCi/g	0.318	0.497	0.498	1.96	0.382	U	0.853	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Pb-214	pCi/g	0.404	0.0933	0.102	1.96	0.0335		0.0776		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Pb-212	pCi/g	0.381	0.0723	0.0869	1.96	0.0318		0.0707		30
160-43124-10	SAMP	HFBR-021-061821	Soil	Eu-154	pCi/g	0.0219	0.0446	0.0446	1.96	0.0464	U	0.0980	U	30
160-43124-10	SAMP	HFBR-021-061821	Soil	Th-232	pCi/g	0.347	0.153	0.157	1.96	0.0532		0.134		30
160-43124-11	SAMP	FSS-065-081821	Soil	Cs-137	pCi/g	0.135	0.0425	0.0446	1.96	0.0081		0.0256		30
160-43124-11	SAMP	FSS-065-081821	Soil	Co-60	pCi/g	0.00513	0.00318	0.00322	1.96	0.0475	U	0.108	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	K-40	pCi/g	4.43	0.921	1.02	1.96	0.116		0.367		30
160-43124-11	SAMP	FSS-065-081821	Soil	Na-22	pCi/g	0.0303	0.0394	0.0395	1.96	0.0265		0.0660	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Zn-65	pCi/g	0.00	0.0473	0.0473	1.96	0.0995	U	0.222	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Ra-226	pCi/g	0.254	0.125	0.127	1.96	0.0613		0.139		30
160-43124-11	SAMP	FSS-065-081821	Soil	Ac-228	pCi/g	0.391	0.137	0.142	1.96	0.0669		0.169		30
160-43124-11	SAMP	FSS-065-081821	Soil	Eu-155	pCi/g	-0.0826	0.286	0.286	1.96	0.238	U	0.489	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Am-241	pCi/g	-0.0661	0.169	0.169	1.96	0.139	U	0.289	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Eu-152	pCi/g	0.0238	0.0446	0.0447	1.96	0.0721	U	0.154	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Bi-214	pCi/g	0.254	0.125	0.127	1.96	0.0613		0.139		30
160-43124-11	SAMP	FSS-065-081821	Soil	Bi-212	pCi/g	0.294	0.845	0.845	1.96	0.6863	U	1.49	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Pb-214	pCi/g	0.284	0.0842	0.0889	1.96	0.0464		0.106		30
160-43124-11	SAMP	FSS-065-081821	Soil	Pb-212	pCi/g	0.221	0.0754	0.0787	1.96	0.0449		0.0985		30
160-43124-11	SAMP	FSS-065-081821	Soil	Eu-154	pCi/g	0.0584	0.0832	0.0835	1.96	0.0437		0.0942	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Th-232	pCi/g	0.391	0.137	0.142	1.96	0.0669		0.169		30
160-43124-12	SAMP	FSS-066-081821	Soil	Cs-137	pCi/g	0.0199	0.0347	0.0348	1.96	0.0267	U	0.0604	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Co-60	pCi/g	-0.0128	0.061	0.061	1.96	0.0301	U	0.0707	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	K-40	pCi/g	4.61	0.888	1.00000	1.96	0.2588		0.623		30
160-43124-12	SAMP	FSS-066-081821	Soil	Na-22	pCi/g	0.00865	0.0269	0.0269	1.96	0.0206	U	0.0512	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Zn-65	pCi/g	0.000000006	0.111	0.111	1.96	0.0933	U	0.205	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Ra-226	pCi/g	0.278	0.0975	0.102	1.96	0.0423		0.0968		30
160-43124-12	SAMP	FSS-066-081821	Soil	Ac-228	pCi/g	0.327	0.101	0.106	1.96	0.0228		0.0723		30
160-43124-12	SAMP	FSS-066-081821	Soil	Eu-155	pCi/g	0.0198	0.0709	0.0709	1.96	0.173	U	0.355	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Am-241	pCi/g	0.0065	0.117	0.117	1.96	0.0981	U	0.204	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Eu-152	pCi/g	0.0349	0.0397	0.0399	1.96	0.0671	U	0.141	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Bi-214	pCi/g	0.278	0.0975	0.102	1.96	0.0423		0.0968		30
160-43124-12	SAMP	FSS-066-081821	Soil	Bi-212	pCi/g	-0.169	0.623	0.623	1.96	0.5098	U	1.11	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Pb-214	pCi/g	0.250	0.0866	0.0903	1.96	0.0516		0.113		30

160-43124-12	SAMP	FSS-066-081821	Soil	Pb-212	pCi/g	0.220	0.0599	0.0661	1.96	0.0323		0.0713		30
160-43124-12	SAMP	FSS-066-081821	Soil	Eu-154	pCi/g	0.0495	0.0891	0.0892	1.96	0.0493		0.104	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Th-232	pCi/g	0.327	0.101	0.106	1.96	0.0228		0.0723		30
160-43124-13	SAMP	FSS-181-081821	Soil	Cs-137	pCi/g	0.0262	0.0627	0.0628	1.96	0.0502	U	0.110	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Co-60	pCi/g	0.0313	0.0164	0.0167	1.96	0.0289		0.0718	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	K-40	pCi/g	4.72	0.975	1.08	1.96	0.122		0.386		30
160-43124-13	SAMP	FSS-181-081821	Soil	Na-22	pCi/g	0.00671	0.0351	0.0351	1.96	0.0279	U	0.0694	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Zn-65	pCi/g	-0.164	0.256	0.256	1.96	0.2054	U	0.435	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Ra-226	pCi/g	0.310	0.114	0.118	1.96	0.0553		0.128		30
160-43124-13	SAMP	FSS-181-081821	Soil	Ac-228	pCi/g	0.177	0.234	0.235	1.96	0.157		0.352	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Eu-155	pCi/g	0.0781	0.288	0.288	1.96	0.240	U	0.493	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Am-241	pCi/g	0.0459	0.171	0.171	1.96	0.142	U	0.294	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Eu-152	pCi/g	0.0770	0.0801	0.0805	1.96	0.0913	U	0.193	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Bi-214	pCi/g	0.310	0.114	0.118	1.96	0.0553		0.128		30
160-43124-13	SAMP	FSS-181-081821	Soil	Bi-212	pCi/g	0.237	0.479	0.480	1.96	0.366	U	0.851	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Pb-214	pCi/g	0.322	0.0882	0.0938	1.96	0.0453		0.105		30
160-43124-13	SAMP	FSS-181-081821	Soil	Pb-212	pCi/g	0.445	0.117	0.126	1.96	0.0748		0.159		30
160-43124-13	SAMP	FSS-181-081821	Soil	Eu-154	pCi/g	0.071	0.0881	0.0884	1.96	0.0614		0.130	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Th-232	pCi/g	0.177	0.234	0.235	1.96	0.157		0.352	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Cs-137	pCi/g	0.193	0.0481	0.0520	1.96	0.0108		0.0289		30
160-43124-14	SAMP	FSS-067-081821	Soil	Co-60	pCi/g	-0.00262	0.0435	0.0435	1.96	0.0218	U	0.0543	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	K-40	pCi/g	5.27	0.955	1.09	1.96	0.2650		0.638		30
160-43124-14	SAMP	FSS-067-081821	Soil	Na-22	pCi/g	-0.019	0.0465	0.0465	1.96	0.0365	U	0.0832	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Zn-65	pCi/g	0.0271	0.109	0.109	1.96	0.0889	U	0.196	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Ra-226	pCi/g	0.266	0.094	0.0978	1.96	0.0459		0.104		30
160-43124-14	SAMP	FSS-067-081821	Soil	Ac-228	pCi/g	0.372	0.154	0.158	1.96	0.0523		0.132		30
160-43124-14	SAMP	FSS-067-081821	Soil	Eu-155	pCi/g	0.0166	0.0985	0.0985	1.96	0.195	U	0.400	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Am-241	pCi/g	0.0529	0.117	0.117	1.96	0.0958	U	0.200	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Eu-152	pCi/g	0.0710	0.110	0.111	1.96	0.0703		0.148	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Bi-214	pCi/g	0.266	0.094	0.0978	1.96	0.0459		0.104		30
160-43124-14	SAMP	FSS-067-081821	Soil	Bi-212	pCi/g	0.142	0.536	0.537	1.96	0.4368	U	0.961	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Pb-214	pCi/g	0.304	0.0778	0.0837	1.96	0.0455		0.101		30
160-43124-14	SAMP	FSS-067-081821	Soil	Pb-212	pCi/g	0.413	0.0727	0.0896	1.96	0.0295		0.0659		30
160-43124-14	SAMP	FSS-067-081821	Soil	Eu-154	pCi/g	-0.0147	0.0563	0.0563	1.96	0.0465	U	0.0982	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Th-232	pCi/g	0.372	0.154	0.158	1.96	0.0523		0.132		30
160-43124-15	SAMP	FSS-068-081821	Soil	Cs-137	pCi/g	0.117	0.0526	0.0539	1.96	0.0203		0.0500		30
160-43124-15	SAMP	FSS-068-081821	Soil	Co-60	pCi/g	0.0355	0.018	0.0183	1.96	0.0115		0.0364	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	K-40	pCi/g	3.83	0.856	0.936	1.96	0.116		0.367		30
160-43124-15	SAMP	FSS-068-081821	Soil	Na-22	pCi/g	-0.0191	0.0577	0.0577	1.96	0.0459	U	0.105	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Zn-65	pCi/g	-0.0780	0.166	0.166	1.96	0.133	U	0.289	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Ra-226	pCi/g	0.0594	0.121	0.121	1.96	0.176	U	0.369	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Ac-228	pCi/g	0.282	0.211	0.213	1.96	0.0945		0.224		30
160-43124-15	SAMP	FSS-068-081821	Soil	Eu-155	pCi/g	0.00	0.0889	0.0889	1.96	0.227	U	0.466	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Am-241	pCi/g	-0.0743	0.166	0.166	1.96	0.137	U	0.284	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Eu-152	pCi/g	0.0957	0.0689	0.0696	1.96	0.0666		0.143	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Bi-214	pCi/g	0.0594	0.121	0.121	1.96	0.176	U	0.369	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Bi-212	pCi/g	-0.293	0.808	0.809	1.96	0.6545	U	1.42	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Pb-214	pCi/g	0.271	0.0948	0.0986	1.96	0.0449		0.103		30
160-43124-15	SAMP	FSS-068-081821	Soil	Pb-212	pCi/g	0.286	0.0756	0.081	1.96	0.0384		0.0855		30
160-43124-15	SAMP	FSS-068-081821	Soil	Eu-154	pCi/g	0.114	0.0543	0.0556	1.96	0.0576		0.122	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Th-232	pCi/g	0.282	0.211	0.213	1.96	0.0945		0.224		30
160-43124-16	SAMP	FSS-069-081821	Soil	Cs-137	pCi/g	0.135	0.0403	0.0426	1.96	0.0098		0.0269		30
160-43124-16	SAMP	FSS-069-081821	Soil	Co-60	pCi/g	0.0154	0.0293	0.0293	1.96	0.0218	U	0.0542	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	K-40	pCi/g	4.43	0.884	0.989	1.96	0.2644		0.636		30
160-43124-16	SAMP	FSS-069-081821	Soil	Na-22	pCi/g	-0.00505	0.0364	0.0364	1.96	0.0297	U	0.0697	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Zn-65	pCi/g	0.0461	0.113	0.113	1.96	0.0903	U	0.199	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Ra-226	pCi/g	0.341	0.104	0.109	1.96	0.0416		0.0957		30
160-43124-16	SAMP	FSS-069-081821	Soil	Ac-228	pCi/g	0.259	0.112	0.115	1.96	0.117		0.261	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Eu-155	pCi/g	-0.000909	0.0646	0.0646	1.96	0.110	U	0.231	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Am-241	pCi/g	-0.0709	0.0544	0.0548	1.96	0.128	U	0.265	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Eu-152	pCi/g	0.0415	0.0495	0.0496	1.96	0.0716	U	0.151	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Bi-214	pCi/g	0.341	0.104	0.109	1.96	0.0416		0.0957		30
160-43124-16	SAMP	FSS-069-081821	Soil	Bi-212	pCi/g	0.142	0.512	0.512	1.96	0.4158	U	0.919	U	30

160-43124-16	SAMP	FSS-069-081821	Soil	Pb-214	pCi/g	0.322	0.0816	0.0879	1.96	0.0308		0.0719		30
160-43124-16	SAMP	FSS-069-081821	Soil	Pb-212	pCi/g	0.317	0.0692	0.0800	1.96	0.0345		0.0760		30
160-43124-16	SAMP	FSS-069-081821	Soil	Eu-154	pCi/g	0.0976	0.0428	0.0439	1.96	0.0458		0.0969		30
160-43124-16	SAMP	FSS-069-081821	Soil	Th-232	pCi/g	0.259	0.112	0.115	1.96	0.117		0.261	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Cs-137	pCi/g	0.00872	0.0746	0.0746	1.96	0.0620	U	0.134	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Co-60	pCi/g	0.0111	0.0191	0.0192	1.96	0.0282	U	0.0703	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	K-40	pCi/g	4.41	0.932	1.03	1.96	0.120		0.378		30
160-43124-17	SAMP	FSS-070-081821	Soil	Na-22	pCi/g	-0.0312	0.052	0.052	1.96	0.0386	U	0.0906	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Zn-65	pCi/g	0.00	0.0244	0.0244	1.96	0.0831	U	0.190	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Ra-226	pCi/g	0.424	0.123	0.130	1.96	0.0518		0.120		30
160-43124-17	SAMP	FSS-070-081821	Soil	Ac-228	pCi/g	0.463	0.269	0.273	1.96	0.119		0.275		30
160-43124-17	SAMP	FSS-070-081821	Soil	Eu-155	pCi/g	-0.0958	0.339	0.339	1.96	0.283	U	0.579	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Am-241	pCi/g	-0.0401	0.164	0.164	1.96	0.136	U	0.283	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Eu-152	pCi/g	0.0406	0.0503	0.0505	1.96	0.0953	U	0.200	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Bi-214	pCi/g	0.424	0.123	0.130	1.96	0.0518		0.120		30
160-43124-17	SAMP	FSS-070-081821	Soil	Bi-212	pCi/g	0.00	0.508	0.508	1.96	0.551	U	1.22	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Pb-214	pCi/g	0.321	0.0951	0.100	1.96	0.0590		0.132		30
160-43124-17	SAMP	FSS-070-081821	Soil	Pb-212	pCi/g	0.476	0.0957	0.107	1.96	0.0464		0.102		30
160-43124-17	SAMP	FSS-070-081821	Soil	Eu-154	pCi/g	0.0975	0.100	0.101	1.96	0.0554		0.118	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Th-232	pCi/g	0.463	0.269	0.273	1.96	0.119		0.275		30
160-43124-18	SAMP	FSS-071-081821	Soil	Cs-137	pCi/g	0.0205	0.0501	0.0501	1.96	0.0402	U	0.088	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Co-60	pCi/g	0.049	0.0277	0.0281	1.96	0.0095		0.0301		30
160-43124-18	SAMP	FSS-071-081821	Soil	K-40	pCi/g	2.96	0.764	0.819	1.96	0.2750		0.662		30
160-43124-18	SAMP	FSS-071-081821	Soil	Na-22	pCi/g	-0.0171	0.0401	0.0402	1.96	0.0309	U	0.0725	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Zn-65	pCi/g	0.0145	0.111	0.111	1.96	0.0921	U	0.203	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Ra-226	pCi/g	0.369	0.109	0.115	1.96	0.0442		0.101		30
160-43124-18	SAMP	FSS-071-081821	Soil	Ac-228	pCi/g	0.196	0.147	0.148	1.96	0.0768		0.182		30
160-43124-18	SAMP	FSS-071-081821	Soil	Eu-155	pCi/g	-0.000946	0.0358	0.0358	1.96	0.222	U	0.455	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Am-241	pCi/g	-0.035	0.0286	0.0288	1.96	0.0744	U	0.158	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Eu-152	pCi/g	0.0533	0.107	0.107	1.96	0.0680	U	0.144	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Bi-214	pCi/g	0.369	0.109	0.115	1.96	0.0442		0.101		30
160-43124-18	SAMP	FSS-071-081821	Soil	Bi-212	pCi/g	-0.419	0.709	0.711	1.96	0.5633	U	1.22	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Pb-214	pCi/g	0.340	0.0848	0.0916	1.96	0.0381		0.0871		30
160-43124-18	SAMP	FSS-071-081821	Soil	Pb-212	pCi/g	0.368	0.069	0.0834	1.96	0.0268		0.0607		30
160-43124-18	SAMP	FSS-071-081821	Soil	Eu-154	pCi/g	-0.00298	0.0519	0.0519	1.96	0.0435	U	0.0923	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Th-232	pCi/g	0.196	0.147	0.148	1.96	0.0768		0.182		30
160-43124-19	SAMP	FSS-072-081821	Soil	Cs-137	pCi/g	0.0197	0.0412	0.0412	1.96	0.0315	U	0.0734	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Co-60	pCi/g	-0.0181	0.0863	0.0863	1.96	0.0426	U	0.0999	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	K-40	pCi/g	4.16	0.935	1.02	1.96	0.127		0.403		30
160-43124-19	SAMP	FSS-072-081821	Soil	Na-22	pCi/g	0.0140	0.0518	0.0518	1.96	0.0412	U	0.0966	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Zn-65	pCi/g	-0.0581	0.188	0.188	1.96	0.153	U	0.332	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Ra-226	pCi/g	0.458	0.125	0.133	1.96	0.0488		0.116		30
160-43124-19	SAMP	FSS-072-081821	Soil	Ac-228	pCi/g	0.355	0.110	0.115	1.96	0.127		0.293		30
160-43124-19	SAMP	FSS-072-081821	Soil	Eu-155	pCi/g	0.0667	0.118	0.118	1.96	0.130	U	0.274	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Am-241	pCi/g	0.0607	0.168	0.168	1.96	0.139	U	0.289	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Eu-152	pCi/g	-0.0139	0.0284	0.0284	1.96	0.0975	U	0.205	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Bi-214	pCi/g	0.458	0.125	0.133	1.96	0.0488		0.116		30
160-43124-19	SAMP	FSS-072-081821	Soil	Bi-212	pCi/g	0.495	0.902	0.903	1.96	0.716	U	1.56	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Pb-214	pCi/g	0.386	0.0993	0.106	1.96	0.0642		0.143		30
160-43124-19	SAMP	FSS-072-081821	Soil	Pb-212	pCi/g	0.406	0.0957	0.104	1.96	0.0501		0.110		30
160-43124-19	SAMP	FSS-072-081821	Soil	Eu-154	pCi/g	-0.0141	0.0294	0.0294	1.96	0.0664	U	0.140	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Th-232	pCi/g	0.355	0.11	0.115	1.96	0.1273		0.293		30
160-43124-2	SAMP	FSS-259-081821	Soil	Cs-137	pCi/g	0.0284	0.0551	0.0552	1.96	0.0430	U	0.0965	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Co-60	pCi/g	-0.0777	0.128	0.128	1.96	0.0613	U	0.138	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	K-40	pCi/g	4.84	1.02	1.12	1.96	0.130		0.410		30
160-43124-2	SAMP	FSS-259-081821	Soil	Na-22	pCi/g	0.00178	0.0358	0.0358	1.96	0.0296	U	0.0737	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Zn-65	pCi/g	0.00	0.0187	0.0187	1.96	0.132	U	0.289	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Ra-226	pCi/g	0.217	0.101	0.103	1.96	0.0562		0.131		30
160-43124-2	SAMP	FSS-259-081821	Soil	Ac-228	pCi/g	0.280	0.207	0.209	1.96	0.0748		0.188		30
160-43124-2	SAMP	FSS-259-081821	Soil	Eu-155	pCi/g	0.0520	0.126	0.126	1.96	0.152	U	0.319	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Am-241	pCi/g	0.0585	0.155	0.155	1.96	0.128	U	0.267	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Eu-152	pCi/g	0.0577	0.295	0.295	1.96	0.2466	U	0.514	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Bi-214	pCi/g	0.217	0.101	0.103	1.96	0.0562		0.131		30

160-43124-2	SAMP	FSS-259-081821	Soil	Bi-212	pCi/g	0.00	0.260	0.260	1.96	0.3935	U	0.914	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Pb-214	pCi/g	0.287	0.0914	0.0958	1.96	0.0537		0.122		30
160-43124-2	SAMP	FSS-259-081821	Soil	Pb-212	pCi/g	0.388	0.0919	0.100	1.96	0.0460		0.102		30
160-43124-2	SAMP	FSS-259-081821	Soil	Eu-154	pCi/g	0.069	0.0751	0.0754	1.96	0.0391		0.0858	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Th-232	pCi/g	0.280	0.207	0.209	1.96	0.0748		0.188		30
160-43124-20	SAMP	FSS-073-081821	Soil	Cs-137	pCi/g	0.0344	0.0627	0.0628	1.96	0.0492	U	0.109	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Co-60	pCi/g	0.0546	0.0234	0.024	1.96	0.0127		0.0403		30
160-43124-20	SAMP	FSS-073-081821	Soil	K-40	pCi/g	5.61	1.09	1.22	1.96	0.128		0.406		30
160-43124-20	SAMP	FSS-073-081821	Soil	Na-22	pCi/g	-0.0475	0.0679	0.068	1.96	0.0507	U	0.116	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Zn-65	pCi/g	0.00	0.0185	0.0185	1.96	0.118	U	0.262	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Ra-226	pCi/g	0.428	0.149	0.155	1.96	0.0700		0.158		30
160-43124-20	SAMP	FSS-073-081821	Soil	Ac-228	pCi/g	0.576	0.172	0.181	1.96	0.0331		0.105		30
160-43124-20	SAMP	FSS-073-081821	Soil	Eu-155	pCi/g	0.00000001	0.254	0.254	1.96	0.213	U	0.441	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Am-241	pCi/g	0.0742	0.168	0.168	1.96	0.138	U	0.288	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Eu-152	pCi/g	0.116	0.161	0.162	1.96	0.0914		0.193	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Bi-214	pCi/g	0.428	0.149	0.155	1.96	0.0700		0.158		30
160-43124-20	SAMP	FSS-073-081821	Soil	Bi-212	pCi/g	0.834	0.385	0.394	1.96	0.108		0.341		30
160-43124-20	SAMP	FSS-073-081821	Soil	Pb-214	pCi/g	0.439	0.109	0.118	1.96	0.0545		0.124		30
160-43124-20	SAMP	FSS-073-081821	Soil	Pb-212	pCi/g	0.424	0.0986	0.108	1.96	0.0521		0.114		30
160-43124-20	SAMP	FSS-073-081821	Soil	Eu-154	pCi/g	0.0763	0.110	0.110	1.96	0.0686		0.145	U	30
160-43124-20	SAMP	FSS-073-081821	Soil	Th-232	pCi/g	0.576	0.172	0.181	1.96	0.0331		0.105		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Cs-137	pCi/g	-0.03108	0.067	0.067	1.96	0.0542	U	0.116	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Co-60	pCi/g	0.01723	0.0464	0.0465	1.96	0.0221	U	0.0549	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	K-40	pCi/g	5.451	0.975	1.12	1.96	0.2680		0.645		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Na-22	pCi/g	0.00	0.00752	0.00752	1.96	0.0089	U	0.0283	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Zn-65	pCi/g	0.00	0.0327	0.0327	1.96	0.114	U	0.247	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Ra-226	pCi/g	0.264	0.0939	0.0977	1.96	0.0424		0.0975		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Ac-228	pCi/g	0.2355	0.09	0.093	1.96	0.130		0.287	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Eu-155	pCi/g	-0.07888	0.143	0.143	1.96	0.203	U	0.415	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Am-241	pCi/g	0.05348	0.122	0.123	1.96	0.101	U	0.210	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Eu-152	pCi/g	0.01819	0.0645	0.0645	1.96	0.0711	U	0.150	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Bi-214	pCi/g	0.264	0.0939	0.0977	1.96	0.0424		0.0975		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Bi-212	pCi/g	-0.1641	0.633	0.634	1.96	0.518	U	1.13	U	30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Pb-214	pCi/g	0.3298	0.0814	0.0881	1.96	0.0287		0.0679		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Pb-212	pCi/g	0.4619	0.0736	0.0941	1.96	0.0243		0.0555		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Eu-154	pCi/g	0.1707	0.0632	0.0656	1.96	0.0466		0.0985		30
160-43124-20 DU	QC_DUP	160-43124-20 DU	Soil	Th-232	pCi/g	0.2355	0.0900	0.0930	1.96	0.130		0.287	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Cs-137	pCi/g	-0.0152	0.0535	0.0535	1.96	0.0437	U	0.0947	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Co-60	pCi/g	-0.0500	0.0907	0.0909	1.96	0.0438	U	0.0984	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	K-40	pCi/g	4.22	0.869	0.966	1.96	0.266		0.640		30
160-43124-21	SAMP	FSS-074-081821	Soil	Na-22	pCi/g	0.0165	0.0296	0.0296	1.96	0.0212	U	0.0526	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Zn-65	pCi/g	-0.000000002	0.114	0.114	1.96	0.0960	U	0.210	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Ra-226	pCi/g	0.261	0.0897	0.0936	1.96	0.0409		0.0944		30
160-43124-21	SAMP	FSS-074-081821	Soil	Ac-228	pCi/g	0.272	0.141	0.144	1.96	0.0525		0.132		30
160-43124-21	SAMP	FSS-074-081821	Soil	Eu-155	pCi/g	-0.000915	0.142	0.142	1.96	0.178	U	0.367	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Am-241	pCi/g	0.0553	0.121	0.121	1.96	0.0994	U	0.207	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Eu-152	pCi/g	-0.0557	0.0989	0.0991	1.96	0.0806	U	0.169	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Bi-214	pCi/g	0.261	0.0897	0.0936	1.96	0.0409		0.0944		30
160-43124-21	SAMP	FSS-074-081821	Soil	Bi-212	pCi/g	0.159	0.882	0.882	1.96	0.732	U	1.55	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Pb-214	pCi/g	0.279	0.108	0.112	1.96	0.0480		0.106		30
160-43124-21	SAMP	FSS-074-081821	Soil	Pb-212	pCi/g	0.387	0.0692	0.0848	1.96	0.0261		0.0592		30
160-43124-21	SAMP	FSS-074-081821	Soil	Eu-154	pCi/g	0.0422	0.0797	0.0798	1.96	0.0554	U	0.116	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Th-232	pCi/g	0.272	0.141	0.144	1.96	0.0525		0.132		30
160-43124-22	SAMP	FSS-075-081821	Soil	Cs-137	pCi/g	-0.00804	0.0501	0.0501	1.96	0.0414	U	0.0902	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Co-60	pCi/g	0.00922	0.0379	0.0379	1.96	0.0218	U	0.0544	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	K-40	pCi/g	3.29	1.21	1.25	1.96	0.5257		1.16		30
160-43124-22	SAMP	FSS-075-081821	Soil	Na-22	pCi/g	-0.00127	0.0357	0.0357	1.96	0.0298	U	0.0699	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Zn-65	pCi/g	0.00727	0.113	0.113	1.96	0.0943	U	0.207	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Ra-226	pCi/g	0.312	0.0944	0.0996	1.96	0.0383		0.0892		30
160-43124-22	SAMP	FSS-075-081821	Soil	Ac-228	pCi/g	0.580	0.116	0.130	1.96	0.0533		0.134		30
160-43124-22	SAMP	FSS-075-081821	Soil	Eu-155	pCi/g	0.0541	0.224	0.224	1.96	0.187	U	0.384	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Am-241	pCi/g	0.0462	0.113	0.114	1.96	0.0932	U	0.195	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Eu-152	pCi/g	0.0655	0.157	0.158	1.96	0.0673	U	0.142	U	30

160-43124-22	SAMP	FSS-075-081821	Soil	Bi-214	pCi/g	0.312	0.0944	0.0996	1.96	0.0383		0.0892		30
160-43124-22	SAMP	FSS-075-081821	Soil	Bi-212	pCi/g	0.313	0.534	0.535	1.96	0.417	U	0.921	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Pb-214	pCi/g	0.342	0.0777	0.0852	1.96	0.0473		0.105		30
160-43124-22	SAMP	FSS-075-081821	Soil	Pb-212	pCi/g	0.466	0.0777	0.0976	1.96	0.0320		0.0709		30
160-43124-22	SAMP	FSS-075-081821	Soil	Eu-154	pCi/g	0.0319	0.063	0.0631	1.96	0.0442	U	0.0935	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Th-232	pCi/g	0.580	0.116	0.130	1.96	0.0533		0.134		30
160-43124-23	SAMP	FSS-076-081821	Soil	Cs-137	pCi/g	0.0894	0.0415	0.0425	1.96	0.0141		0.0363		30
160-43124-23	SAMP	FSS-076-081821	Soil	Co-60	pCi/g	-0.0549	0.104	0.104	1.96	0.0522	U	0.116	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	K-40	pCi/g	4.08	0.894	0.983	1.96	0.278		0.673		30
160-43124-23	SAMP	FSS-076-081821	Soil	Na-22	pCi/g	-0.0126	0.0486	0.0486	1.96	0.0390	U	0.0894	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Zn-65	pCi/g	-0.0937	0.106	0.107	1.96	0.134	U	0.289	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Ra-226	pCi/g	0.375	0.094	0.101	1.96	0.0293		0.0727		30
160-43124-23	SAMP	FSS-076-081821	Soil	Ac-228	pCi/g	0.447	0.138	0.145	1.96	0.0260		0.0823		30
160-43124-23	SAMP	FSS-076-081821	Soil	Eu-155	pCi/g	-0.00424	0.128	0.128	1.96	0.163	U	0.338	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Am-241	pCi/g	0.0591	0.159	0.159	1.96	0.131	U	0.272	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Eu-152	pCi/g	0.0676	0.0999	0.100	1.96	0.0768	U	0.162	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Bi-214	pCi/g	0.375	0.094	0.101	1.96	0.0293		0.0727		30
160-43124-23	SAMP	FSS-076-081821	Soil	Bi-212	pCi/g	-0.250	0.691	0.691	1.96	0.5589	U	1.22	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Pb-214	pCi/g	0.383	0.0826	0.0913	1.96	0.0356		0.0828		30
160-43124-23	SAMP	FSS-076-081821	Soil	Pb-212	pCi/g	0.417	0.0804	0.0962	1.96	0.0364		0.0805		30
160-43124-23	SAMP	FSS-076-081821	Soil	Eu-154	pCi/g	0.0443	0.0769	0.0771	1.96	0.0507	U	0.107	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Th-232	pCi/g	0.447	0.138	0.145	1.96	0.0260		0.0823		30
160-43124-24	SAMP	FSS-077-081821	Soil	Cs-137	pCi/g	0.103	0.0359	0.0374	1.96	0.0103		0.0272		30
160-43124-24	SAMP	FSS-077-081821	Soil	Co-60	pCi/g	0.0111	0.0194	0.0195	1.96	0.0083		0.0262	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	K-40	pCi/g	4.99	0.829	0.968	1.96	0.0836		0.264		30
160-43124-24	SAMP	FSS-077-081821	Soil	Na-22	pCi/g	0.0195	0.0358	0.0359	1.96	0.0269	U	0.0632	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Zn-65	pCi/g	0.0411	0.0886	0.0887	1.96	0.0697	U	0.156	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Ra-226	pCi/g	0.320	0.0956	0.101	1.96	0.0394		0.0901		30
160-43124-24	SAMP	FSS-077-081821	Soil	Ac-228	pCi/g	0.354	0.111	0.117	1.96	0.0212		0.0670		30
160-43124-24	SAMP	FSS-077-081821	Soil	Eu-155	pCi/g	0.00	0.0752	0.0752	1.96	0.196	U	0.401	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Am-241	pCi/g	-0.0563	0.142	0.142	1.96	0.117	U	0.243	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Eu-152	pCi/g	0.075	0.115	0.115	1.96	0.0715		0.150	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Bi-214	pCi/g	0.320	0.0956	0.101	1.96	0.0394		0.0901		30
160-43124-24	SAMP	FSS-077-081821	Soil	Bi-212	pCi/g	0.287	0.452	0.453	1.96	0.3489	U	0.777	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Pb-214	pCi/g	0.374	0.0752	0.0843	1.96	0.0363		0.082		30
160-43124-24	SAMP	FSS-077-081821	Soil	Pb-212	pCi/g	0.470	0.0696	0.0916	1.96	0.0222		0.0506		30
160-43124-24	SAMP	FSS-077-081821	Soil	Eu-154	pCi/g	0.0258	0.0350	0.0351	1.96	0.0500	U	0.105	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Th-232	pCi/g	0.354	0.111	0.117	1.96	0.0212		0.0670		30
160-43124-25	SAMP	FSS-078-081821	Soil	Cs-137	pCi/g	-0.00913	0.0604	0.0604	1.96	0.0498	U	0.110	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Co-60	pCi/g	-0.0300	0.0908	0.0908	1.96	0.0442	U	0.104	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	K-40	pCi/g	5.96	1.14	1.28	1.96	0.132		0.418		30
160-43124-25	SAMP	FSS-078-081821	Soil	Na-22	pCi/g	-0.0327	0.0675	0.0675	1.96	0.0523	U	0.119	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Zn-65	pCi/g	0.00075	0.179	0.179	1.96	0.150	U	0.327	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Ra-226	pCi/g	0.688	0.187	0.199	1.96	0.0768		0.172		30
160-43124-25	SAMP	FSS-078-081821	Soil	Ac-228	pCi/g	0.627	0.182	0.192	1.96	0.0341		0.108		30
160-43124-25	SAMP	FSS-078-081821	Soil	Eu-155	pCi/g	0.0322	0.177	0.178	1.96	0.148	U	0.310	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Am-241	pCi/g	0.0274	0.168	0.168	1.96	0.140	U	0.291	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Eu-152	pCi/g	0.0740	0.114	0.114	1.96	0.101	U	0.213	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Bi-214	pCi/g	0.688	0.187	0.199	1.96	0.0768		0.172		30
160-43124-25	SAMP	FSS-078-081821	Soil	Bi-212	pCi/g	0.574	1.04	1.04	1.96	0.8300	U	1.79	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Pb-214	pCi/g	0.576	0.148	0.159	1.96	0.0630		0.141		30
160-43124-25	SAMP	FSS-078-081821	Soil	Pb-212	pCi/g	0.350	0.0911	0.0979	1.96	0.0480		0.106		30
160-43124-25	SAMP	FSS-078-081821	Soil	Eu-154	pCi/g	0.0880	0.115	0.115	1.96	0.0702		0.148	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Th-232	pCi/g	0.627	0.182	0.192	1.96	0.0341		0.108		30
160-43124-26	SAMP	FSS-079-081821	Soil	Cs-137	pCi/g	0.292	0.0571	0.0644	1.96	0.0067		0.0213		30
160-43124-26	SAMP	FSS-079-081821	Soil	Co-60	pCi/g	0.0214	0.0311	0.0312	1.96	0.0226	U	0.0565	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	K-40	pCi/g	4.46	0.912	1.02	1.96	0.2687		0.652		30
160-43124-26	SAMP	FSS-079-081821	Soil	Na-22	pCi/g	-0.0230	0.0413	0.0414	1.96	0.0309	U	0.0727	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Zn-65	pCi/g	-0.000205	0.132	0.132	1.96	0.110	U	0.241	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Ra-226	pCi/g	0.371	0.0945	0.102	1.96	0.0284		0.0704		30
160-43124-26	SAMP	FSS-079-081821	Soil	Ac-228	pCi/g	0.241	0.176	0.178	1.96	0.109		0.247	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Eu-155	pCi/g	-0.0888	0.0599	0.0606	1.96	0.197	U	0.405	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Am-241	pCi/g	0.00335	0.117	0.117	1.96	0.0781	U	0.165	U	30

160-43124-26	SAMP	FSS-079-081821	Soil	Eu-152	pCi/g	0.106	0.138	0.139	1.96	0.0711		0.150	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Bi-214	pCi/g	0.371	0.0945	0.102	1.96	0.0284		0.0704		30
160-43124-26	SAMP	FSS-079-081821	Soil	Bi-212	pCi/g	-0.0117	0.491	0.491	1.96	0.411	U	0.917	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Pb-214	pCi/g	0.351	0.0827	0.0901	1.96	0.0443		0.0999		30
160-43124-26	SAMP	FSS-079-081821	Soil	Pb-212	pCi/g	0.347	0.0741	0.0862	1.96	0.0355		0.0784		30
160-43124-26	SAMP	FSS-079-081821	Soil	Eu-154	pCi/g	0.0178	0.0287	0.0288	1.96	0.0553	U	0.116	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Th-232	pCi/g	0.241	0.176	0.178	1.96	0.109		0.247	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Cs-137	pCi/g	0.232	0.0522	0.0573	1.96	0.0071		0.0225		30
160-43124-27	SAMP	FSS-279-081821	Soil	Co-60	pCi/g	0.0206	0.0492	0.0492	1.96	0.0238	U	0.0596	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	K-40	pCi/g	3.44	0.958	1.02	1.96	0.371		0.862		30
160-43124-27	SAMP	FSS-279-081821	Soil	Na-22	pCi/g	0.0214	0.0187	0.0188	1.96	0.0100		0.0315	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Zn-65	pCi/g	-0.0560	0.101	0.101	1.96	0.117	U	0.254	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Ra-226	pCi/g	0.240	0.0827	0.0862	1.96	0.0354		0.0851		30
160-43124-27	SAMP	FSS-279-081821	Soil	Ac-228	pCi/g	0.277	0.150	0.153	1.96	0.0573		0.146		30
160-43124-27	SAMP	FSS-279-081821	Soil	Eu-155	pCi/g	0.0554	0.118	0.118	1.96	0.156	U	0.324	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Am-241	pCi/g	-0.0719	0.188	0.188	1.96	0.156	U	0.321	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Eu-152	pCi/g	0.0684	0.135	0.135	1.96	0.0678		0.144	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Bi-214	pCi/g	0.240	0.0827	0.0862	1.96	0.0354		0.0851		30
160-43124-27	SAMP	FSS-279-081821	Soil	Bi-212	pCi/g	-0.0155	0.538	0.538	1.96	0.4506	U	1.00	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Pb-214	pCi/g	0.284	0.0911	0.0956	1.96	0.0397		0.0913		30
160-43124-27	SAMP	FSS-279-081821	Soil	Pb-212	pCi/g	0.394	0.0806	0.0949	1.96	0.0382		0.0842		30
160-43124-27	SAMP	FSS-279-081821	Soil	Eu-154	pCi/g	0.0449	0.102	0.102	1.96	0.0514	U	0.109	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Th-232	pCi/g	0.277	0.150	0.153	1.96	0.0573		0.146		30
160-43124-28	SAMP	FSS-080-081821	Soil	Cs-137	pCi/g	0.238	0.0616	0.0662	1.96	0.0333		0.0733		30
160-43124-28	SAMP	FSS-080-081821	Soil	Co-60	pCi/g	-0.0286	0.0705	0.0705	1.96	0.0343	U	0.0783	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	K-40	pCi/g	3.92	0.794	0.886	1.96	0.2405		0.579		30
160-43124-28	SAMP	FSS-080-081821	Soil	Na-22	pCi/g	0.0241	0.0179	0.018	1.96	0.0080		0.0254	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Zn-65	pCi/g	0.00	0.012	0.012	1.96	0.0868	U	0.190	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Ra-226	pCi/g	0.311	0.0813	0.0873	1.96	0.0318		0.075		30
160-43124-28	SAMP	FSS-080-081821	Soil	Ac-228	pCi/g	0.362	0.131	0.136	1.96	0.0388		0.102		30
160-43124-28	SAMP	FSS-080-081821	Soil	Eu-155	pCi/g	0.0541	0.132	0.132	1.96	0.194	U	0.397	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Am-241	pCi/g	0.0519	0.119	0.119	1.96	0.0975	U	0.203	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Eu-152	pCi/g	0.0543	0.0753	0.0755	1.96	0.0652	U	0.137	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Bi-214	pCi/g	0.311	0.0813	0.0873	1.96	0.0318		0.0750		30
160-43124-28	SAMP	FSS-080-081821	Soil	Bi-212	pCi/g	0.0491	0.517	0.517	1.96	0.430	U	0.941	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Pb-214	pCi/g	0.310	0.0775	0.0836	1.96	0.0444		0.0982		30
160-43124-28	SAMP	FSS-080-081821	Soil	Pb-212	pCi/g	0.355	0.0688	0.0822	1.96	0.0333		0.0729		30
160-43124-28	SAMP	FSS-080-081821	Soil	Eu-154	pCi/g	-0.0139	0.0618	0.0618	1.96	0.0513	U	0.107	U	30
160-43124-28	SAMP	FSS-080-081821	Soil	Th-232	pCi/g	0.362	0.131	0.136	1.96	0.0388		0.102		30
160-43124-29	SAMP	FSS-280-081821	Soil	Cs-137	pCi/g	0.142	0.046	0.0482	1.96	0.0154		0.0371		30
160-43124-29	SAMP	FSS-280-081821	Soil	Co-60	pCi/g	0.0210	0.0117	0.0119	1.96	0.0080		0.0252	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	K-40	pCi/g	4.25	0.751	0.864	1.96	0.0805		0.255		30
160-43124-29	SAMP	FSS-280-081821	Soil	Na-22	pCi/g	-0.00992	0.0394	0.0394	1.96	0.0318	U	0.0725	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Zn-65	pCi/g	0.00	0.0115	0.0115	1.96	0.0717	U	0.159	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Ra-226	pCi/g	0.278	0.113	0.116	1.96	0.0514		0.114		30
160-43124-29	SAMP	FSS-280-081821	Soil	Ac-228	pCi/g	0.372	0.131	0.136	1.96	0.0382		0.100		30
160-43124-29	SAMP	FSS-280-081821	Soil	Eu-155	pCi/g	-0.0675	0.277	0.277	1.96	0.232	U	0.472	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Am-241	pCi/g	0.00	0.0478	0.0478	1.96	0.0603	U	0.128	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Eu-152	pCi/g	0.00928	0.0243	0.0243	1.96	0.0664	U	0.139	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Bi-214	pCi/g	0.278	0.113	0.116	1.96	0.0514		0.114		30
160-43124-29	SAMP	FSS-280-081821	Soil	Bi-212	pCi/g	0.0189	0.488	0.488	1.96	0.408	U	0.893	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Pb-214	pCi/g	0.198	0.0784	0.0809	1.96	0.0377		0.0845		30
160-43124-29	SAMP	FSS-280-081821	Soil	Pb-212	pCi/g	0.324	0.0627	0.075	1.96	0.0288		0.0636		30
160-43124-29	SAMP	FSS-280-081821	Soil	Eu-154	pCi/g	0.0472	0.0579	0.0581	1.96	0.0382		0.0809	U	30
160-43124-29	SAMP	FSS-280-081821	Soil	Th-232	pCi/g	0.372	0.131	0.136	1.96	0.0382		0.100		30
160-43124-3	SAMP	FSS-060-081821	Soil	Cs-137	pCi/g	0.00365	0.0397	0.0397	1.96	0.0330	U	0.073	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Co-60	pCi/g	-0.0165	0.0611	0.0611	1.96	0.0300	U	0.0703	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	K-40	pCi/g	3.77	0.812	0.896	1.96	0.257		0.619		30
160-43124-3	SAMP	FSS-060-081821	Soil	Na-22	pCi/g	-0.0515	0.0556	0.0559	1.96	0.0409	U	0.0918	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Zn-65	pCi/g	-0.000963	0.0947	0.0947	1.96	0.0795	U	0.177	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Ra-226	pCi/g	0.249	0.0857	0.0894	1.96	0.0393		0.0908		30
160-43124-3	SAMP	FSS-060-081821	Soil	Ac-228	pCi/g	0.270	0.116	0.119	1.96	0.0718		0.170		30
160-43124-3	SAMP	FSS-060-081821	Soil	Eu-155	pCi/g	-0.000885	0.140	0.140	1.96	0.187	U	0.383	U	30

160-43124-3	SAMP	FSS-060-081821	Soil	Am-241	pCi/g	0.00392	0.120	0.120	1.96	0.101	U	0.209	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Eu-152	pCi/g	0.0524	0.114	0.114	1.96	0.0604	U	0.128	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Bi-214	pCi/g	0.249	0.0857	0.0894	1.96	0.0393		0.0908		30
160-43124-3	SAMP	FSS-060-081821	Soil	Bi-212	pCi/g	-0.205	0.544	0.544	1.96	0.4374	U	0.960	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Pb-214	pCi/g	0.171	0.0723	0.0744	1.96	0.0674		0.145		30
160-43124-3	SAMP	FSS-060-081821	Soil	Pb-212	pCi/g	0.306	0.0617	0.0729	1.96	0.0250		0.0567		30
160-43124-3	SAMP	FSS-060-081821	Soil	Eu-154	pCi/g	0.0593	0.0368	0.0373	1.96	0.0379		0.0809	U	30
160-43124-3	SAMP	FSS-060-081821	Soil	Th-232	pCi/g	0.270	0.116	0.119	1.96	0.0718		0.170		30
160-43124-30	SAMP	FSS-081-081821	Soil	Cs-137	pCi/g	0.0237	0.0432	0.0433	1.96	0.0340	U	0.0748	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Co-60	pCi/g	0.0146	0.0100	0.0101	1.96	0.0208	U	0.0516	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	K-40	pCi/g	3.69	0.796	0.878	1.96	0.252		0.607		30
160-43124-30	SAMP	FSS-081-081821	Soil	Na-22	pCi/g	0.0506	0.0265	0.0269	1.96	0.0084		0.0266		30
160-43124-30	SAMP	FSS-081-081821	Soil	Zn-65	pCi/g	0.0423	0.0881	0.0882	1.96	0.0689	U	0.155	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Ra-226	pCi/g	0.317	0.0844	0.0903	1.96	0.0333		0.0786		30
160-43124-30	SAMP	FSS-081-081821	Soil	Ac-228	pCi/g	0.578	0.108	0.122	1.96	0.0223		0.0704		30
160-43124-30	SAMP	FSS-081-081821	Soil	Eu-155	pCi/g	0.0617	0.162	0.163	1.96	0.134	U	0.278	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Am-241	pCi/g	0.0188	0.121	0.121	1.96	0.101	U	0.209	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Eu-152	pCi/g	0.0737	0.131	0.132	1.96	0.0575		0.122	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Bi-214	pCi/g	0.317	0.0844	0.0903	1.96	0.0333		0.0786		30
160-43124-30	SAMP	FSS-081-081821	Soil	Bi-212	pCi/g	0.226	0.607	0.608	1.96	0.491	U	1.07	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Pb-214	pCi/g	0.319	0.0716	0.0787	1.96	0.0339		0.0777		30
160-43124-30	SAMP	FSS-081-081821	Soil	Pb-212	pCi/g	0.353	0.0721	0.0848	1.96	0.0367		0.0800		30
160-43124-30	SAMP	FSS-081-081821	Soil	Eu-154	pCi/g	0.0284	0.0566	0.0567	1.96	0.0433	U	0.0915	U	30
160-43124-30	SAMP	FSS-081-081821	Soil	Th-232	pCi/g	0.578	0.108	0.122	1.96	0.0223		0.0704		30
160-43124-31	SAMP	FSS-281-081821	Soil	Cs-137	pCi/g	-0.00288	0.0652	0.0652	1.96	0.0546	U	0.119	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Co-60	pCi/g	0.0105	0.0361	0.0362	1.96	0.0274	U	0.0681	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	K-40	pCi/g	4.42	0.919	1.02	1.96	0.116		0.366		30
160-43124-31	SAMP	FSS-281-081821	Soil	Na-22	pCi/g	-0.0238	0.0584	0.0584	1.96	0.0458	U	0.105	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Zn-65	pCi/g	0.00	0.0167	0.0167	1.96	0.109	U	0.241	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Ra-226	pCi/g	0.0787	0.142	0.142	1.96	0.186	U	0.387	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Ac-228	pCi/g	0.532	0.168	0.176	1.96	0.0944		0.224		30
160-43124-31	SAMP	FSS-281-081821	Soil	Eu-155	pCi/g	0.00	0.0635	0.0635	1.96	0.194	U	0.402	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Am-241	pCi/g	-0.0722	0.156	0.157	1.96	0.129	U	0.268	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Eu-152	pCi/g	0.0612	0.114	0.115	1.96	0.0825	U	0.175	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Bi-214	pCi/g	0.0787	0.142	0.142	1.96	0.186	U	0.387	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Bi-212	pCi/g	-0.503	0.93	0.931	1.96	0.744	U	1.60	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Pb-214	pCi/g	0.391	0.119	0.126	1.96	0.0544		0.122		30
160-43124-31	SAMP	FSS-281-081821	Soil	Pb-212	pCi/g	0.484	0.0914	0.104	1.96	0.0407		0.0899		30
160-43124-31	SAMP	FSS-281-081821	Soil	Eu-154	pCi/g	0.0463	0.0769	0.0771	1.96	0.0618	U	0.130	U	30
160-43124-31	SAMP	FSS-281-081821	Soil	Th-232	pCi/g	0.532	0.168	0.176	1.96	0.0944		0.224		30
160-43124-4	SAMP	FSS-260-081821	Soil	Cs-137	pCi/g	0.0223	0.0378	0.0378	1.96	0.0283	U	0.0656	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Co-60	pCi/g	0.0205	0.018	0.0181	1.96	0.0111		0.0351	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	K-40	pCi/g	3.38	0.872	0.935	1.96	0.305		0.739		30
160-43124-4	SAMP	FSS-260-081821	Soil	Na-22	pCi/g	0.0276	0.0221	0.0222	1.96	0.0107		0.0339	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Zn-65	pCi/g	0.00371	0.124	0.124	1.96	0.104	U	0.230	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Ra-226	pCi/g	0.235	0.0946	0.0975	1.96	0.0438		0.103		30
160-43124-4	SAMP	FSS-260-081821	Soil	Ac-228	pCi/g	0.341	0.119	0.124	1.96	0.0285		0.0903		30
160-43124-4	SAMP	FSS-260-081821	Soil	Eu-155	pCi/g	-0.00465	0.120	0.120	1.96	0.162	U	0.335	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Am-241	pCi/g	-0.0583	0.150	0.151	1.96	0.124	U	0.258	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Eu-152	pCi/g	0.0734	0.142	0.142	1.96	0.0749	U	0.159	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Bi-214	pCi/g	0.235	0.0946	0.0975	1.96	0.0438		0.103		30
160-43124-4	SAMP	FSS-260-081821	Soil	Bi-212	pCi/g	-0.271	0.732	0.733	1.96	0.591	U	1.29	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Pb-214	pCi/g	0.292	0.0967	0.101	1.96	0.0380		0.0887		30
160-43124-4	SAMP	FSS-260-081821	Soil	Pb-212	pCi/g	0.272	0.0669	0.0753	1.96	0.0287		0.0658		30
160-43124-4	SAMP	FSS-260-081821	Soil	Eu-154	pCi/g	0.0361	0.0498	0.0500	1.96	0.0578	U	0.122	U	30
160-43124-4	SAMP	FSS-260-081821	Soil	Th-232	pCi/g	0.341	0.119	0.124	1.96	0.0285		0.0903		30
160-43124-5	SAMP	FSS-061-081821	Soil	Cs-137	pCi/g	-0.0392	0.0651	0.0652	1.96	0.0509	U	0.112	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Co-60	pCi/g	-0.0288	0.0869	0.087	1.96	0.0423	U	0.0992	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	K-40	pCi/g	4.78	0.999	1.11	1.96	0.127		0.400		30
160-43124-5	SAMP	FSS-061-081821	Soil	Na-22	pCi/g	0.0122	0.0378	0.0378	1.96	0.0289	U	0.0719	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Zn-65	pCi/g	-0.0217	0.135	0.135	1.96	0.111	U	0.248	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Ra-226	pCi/g	0.399	0.132	0.138	1.96	0.0563		0.130		30
160-43124-5	SAMP	FSS-061-081821	Soil	Ac-228	pCi/g	0.322	0.119	0.123	1.96	0.163		0.364	U	30

160-43124-5	SAMP	FSS-061-081821	Soil	Eu-155	pCi/g	-0.0983	0.333	0.333	1.96	0.277	U	0.569	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Am-241	pCi/g	0.0217	0.171	0.171	1.96	0.143	U	0.297	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Eu-152	pCi/g	0.0943	0.205	0.206	1.96	0.0807		0.172	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Bi-214	pCi/g	0.399	0.132	0.138	1.96	0.0563		0.130		30
160-43124-5	SAMP	FSS-061-081821	Soil	Bi-212	pCi/g	0.00	0.567	0.567	1.96	0.5636	U	1.25	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Pb-214	pCi/g	0.381	0.124	0.13	1.96	0.0620		0.139		30
160-43124-5	SAMP	FSS-061-081821	Soil	Pb-212	pCi/g	0.425	0.0954	0.105	1.96	0.0482		0.106		30
160-43124-5	SAMP	FSS-061-081821	Soil	Eu-154	pCi/g	0.0296	0.0559	0.056	1.96	0.0446	U	0.0966	U	30
160-43124-5	SAMP	FSS-061-081821	Soil	Th-232	pCi/g	0.322	0.119	0.123	1.96	0.163		0.364	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Cs-137	pCi/g	-0.0421	0.0679	0.068	1.96	0.0544	U	0.116	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Co-60	pCi/g	-0.0128	0.0608	0.0608	1.96	0.0300	U	0.0704	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	K-40	pCi/g	5.21	0.935	1.07	1.96	0.2579		0.621		30
160-43124-6	SAMP	FSS-261-081821	Soil	Na-22	pCi/g	-0.0357	0.0537	0.0538	1.96	0.0410	U	0.092	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Zn-65	pCi/g	-0.0566	0.137	0.137	1.96	0.111	U	0.240	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Ra-226	pCi/g	0.210	0.0948	0.0972	1.96	0.0469		0.106		30
160-43124-6	SAMP	FSS-261-081821	Soil	Ac-228	pCi/g	0.440	0.208	0.212	1.96	0.0882		0.203		30
160-43124-6	SAMP	FSS-261-081821	Soil	Eu-155	pCi/g	0.0351	0.191	0.191	1.96	0.160	U	0.329	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Am-241	pCi/g	-0.0691	0.0724	0.0728	1.96	0.125	U	0.259	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Eu-152	pCi/g	0.188	0.111	0.113	1.96	0.0356		0.0853		30
160-43124-6	SAMP	FSS-261-081821	Soil	Bi-214	pCi/g	0.210	0.0948	0.0972	1.96	0.0469		0.106		30
160-43124-6	SAMP	FSS-261-081821	Soil	Bi-212	pCi/g	0.884	0.328	0.340	1.96	0.0736		0.233		30
160-43124-6	SAMP	FSS-261-081821	Soil	Pb-214	pCi/g	0.269	0.0776	0.0823	1.96	0.0391		0.0884		30
160-43124-6	SAMP	FSS-261-081821	Soil	Pb-212	pCi/g	0.427	0.071	0.0893	1.96	0.0261		0.0589		30
160-43124-6	SAMP	FSS-261-081821	Soil	Eu-154	pCi/g	0.00761	0.00884	0.00888	1.96	0.0498	U	0.105	U	30
160-43124-6	SAMP	FSS-261-081821	Soil	Th-232	pCi/g	0.440	0.208	0.212	1.96	0.0882		0.203		30
160-43124-7	SAMP	FSS-062-081821	Soil	Cs-137	pCi/g	0.0346	0.0659	0.066	1.96	0.0521	U	0.115	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Co-60	pCi/g	0.0264	0.0183	0.0185	1.96	0.0305	U	0.0759	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	K-40	pCi/g	1.49	0.564	0.583	1.96	0.129		0.408		30
160-43124-7	SAMP	FSS-062-081821	Soil	Na-22	pCi/g	-0.00709	0.051	0.051	1.96	0.0417	U	0.0978	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Zn-65	pCi/g	0.00	0.0263	0.0263	1.96	0.135	U	0.295	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Ra-226	pCi/g	0.254	0.121	0.124	1.96	0.0644		0.147		30
160-43124-7	SAMP	FSS-062-081821	Soil	Ac-228	pCi/g	0.538	0.161	0.169	1.96	0.0744		0.188		30
160-43124-7	SAMP	FSS-062-081821	Soil	Eu-155	pCi/g	-0.00302	0.00672	0.00673	1.96	0.2920	U	0.598	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Am-241	pCi/g	-0.0747	0.172	0.173	1.96	0.142	U	0.295	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Eu-152	pCi/g	0.0894	0.169	0.169	1.96	0.0920	U	0.195	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Bi-214	pCi/g	0.254	0.121	0.124	1.96	0.0644		0.147		30
160-43124-7	SAMP	FSS-062-081821	Soil	Bi-212	pCi/g	-0.342	0.817	0.818	1.96	0.6548	U	1.44	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Pb-214	pCi/g	0.298	0.0878	0.0927	1.96	0.0511		0.117		30
160-43124-7	SAMP	FSS-062-081821	Soil	Pb-212	pCi/g	0.440	0.0928	0.103	1.96	0.0418		0.0932		30
160-43124-7	SAMP	FSS-062-081821	Soil	Eu-154	pCi/g	0.0307	0.135	0.135	1.96	0.0692	U	0.146	U	30
160-43124-7	SAMP	FSS-062-081821	Soil	Th-232	pCi/g	0.538	0.161	0.169	1.96	0.0744		0.188		30
160-43124-8	SAMP	FSS-063-081821	Soil	Cs-137	pCi/g	0.0803	0.0324	0.0334	1.96	0.0078		0.0247		30
160-43124-8	SAMP	FSS-063-081821	Soil	Co-60	pCi/g	0.0131	0.0347	0.0347	1.96	0.0262	U	0.0656	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	K-40	pCi/g	1.48	0.823	0.837	1.96	0.4083		0.949		30
160-43124-8	SAMP	FSS-063-081821	Soil	Na-22	pCi/g	0.00784	0.0324	0.0324	1.96	0.0253	U	0.0634	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Zn-65	pCi/g	-0.00467	0.102	0.102	1.96	0.101	U	0.224	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Ra-226	pCi/g	0.289	0.109	0.113	1.96	0.0482		0.112		30
160-43124-8	SAMP	FSS-063-081821	Soil	Ac-228	pCi/g	0.475	0.151	0.158	1.96	0.0292		0.0924		30
160-43124-8	SAMP	FSS-063-081821	Soil	Eu-155	pCi/g	0.0552	0.133	0.133	1.96	0.177	U	0.366	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Am-241	pCi/g	-0.0653	0.173	0.173	1.96	0.143	U	0.297	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Eu-152	pCi/g	0.091	0.176	0.176	1.96	0.140	U	0.299	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Bi-214	pCi/g	0.289	0.109	0.113	1.96	0.0482		0.112		30
160-43124-8	SAMP	FSS-063-081821	Soil	Bi-212	pCi/g	0.503	1.04	1.04	1.96	0.842	U	1.79	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Pb-214	pCi/g	0.343	0.0927	0.0991	1.96	0.0290		0.0710		30
160-43124-8	SAMP	FSS-063-081821	Soil	Pb-212	pCi/g	0.469	0.0945	0.112	1.96	0.0471		0.103		30
160-43124-8	SAMP	FSS-063-081821	Soil	Eu-154	pCi/g	0.0677	0.0892	0.0894	1.96	0.0512		0.109	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Th-232	pCi/g	0.475	0.151	0.158	1.96	0.0292		0.0924		30
160-43124-9	SAMP	FSS-064-081821	Soil	Cs-137	pCi/g	0.0333	0.0639	0.064	1.96	0.0507	U	0.111	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Co-60	pCi/g	0.025	0.0219	0.0221	1.96	0.0117		0.0369	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	K-40	pCi/g	0.103	0.843	0.843	1.96	0.500	U	1.14	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Na-22	pCi/g	-0.0387	0.0599	0.0601	1.96	0.0451	U	0.103	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Zn-65	pCi/g	-0.042	0.0894	0.0895	1.96	0.127	U	0.277	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Ra-226	pCi/g	0.409	0.106	0.114	1.96	0.0338		0.0840		30

160-43124-9	SAMP	FSS-064-081821	Soil	Ac-228	pCi/g	0.320	0.209	0.212	1.96	0.130		0.294		30
160-43124-9	SAMP	FSS-064-081821	Soil	Eu-155	pCi/g	0.0645	0.201	0.201	1.96	0.167	U	0.346	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Am-241	pCi/g	0.0151	0.173	0.173	1.96	0.145	U	0.301	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Eu-152	pCi/g	0.0876	0.0696	0.0702	1.96	0.0335		0.0858		30
160-43124-9	SAMP	FSS-064-081821	Soil	Bi-214	pCi/g	0.409	0.106	0.114	1.96	0.0338		0.0840		30
160-43124-9	SAMP	FSS-064-081821	Soil	Bi-212	pCi/g	0.00	0.116	0.116	1.96	0.4566	U	1.03	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Pb-214	pCi/g	0.349	0.0950	0.101	1.96	0.0461		0.106		30
160-43124-9	SAMP	FSS-064-081821	Soil	Pb-212	pCi/g	0.357	0.0831	0.0946	1.96	0.0408		0.0905		30
160-43124-9	SAMP	FSS-064-081821	Soil	Eu-154	pCi/g	0.0612	0.131	0.131	1.96	0.0568		0.120	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Th-232	pCi/g	0.320	0.209	0.212	1.96	0.130		0.294		30
LCS 160-524240/2-A	QC_LCS	LCS 160-524240/2-A	Soil	Cs-137	pCi/g	25.56	0.552	2.66	1.96	0.0880		0.183		30
LCS 160-524240/2-A	QC_LCS	LCS 160-524240/2-A	Soil	Co-60	pCi/g	7.89	0.256	0.817	1.96	0.0309		0.0726		30
LCS 160-524240/2-A	QC_LCS	LCS 160-524240/2-A	Soil	Am-241	pCi/g	95.39	1.46	9.81	1.96	0.529		1.07		30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Cs-137	pCi/g	25.88	0.621	2.71	1.96	0.0883		0.186		30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Co-60	pCi/g	8.348	0.288	0.870	1.96	0.0121		0.0382		30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Am-241	pCi/g	93.85	1.54	9.67	1.96	0.568		1.15		30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Cs-137	pCi/g	-0.002464	0.0728	0.0728	1.96	0.0454	U	0.102	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Co-60	pCi/g	-0.01622	0.0906	0.0906	1.96	0.0463	U	0.109	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	K-40	pCi/g	-0.5581	0.804	0.806	1.96	0.607	U	1.38	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Na-22	pCi/g	0.00	0.0115	0.0115	1.96	0.0137	U	0.0433	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Zn-65	pCi/g	-0.005834	0.131	0.131	1.96	0.0686	U	0.166	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Ra-226	pCi/g	-0.008202	0.126	0.126	1.96	0.106	U	0.232	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Ac-228	pCi/g	0.1584	0.110	0.111	1.96	0.0365		0.115		30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Eu-155	pCi/g	0.03885	0.154	0.154	1.96	0.127	U	0.269	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Am-241	pCi/g	-0.05574	0.153	0.153	1.96	0.125	U	0.264	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Eu-152	pCi/g	0.07685	0.0556	0.0562	1.96	0.0906	U	0.193	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Bi-214	pCi/g	-0.008202	0.126	0.126	1.96	0.106	U	0.232	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Bi-212	pCi/g	0.00	0.0995	0.0995	1.96	0.410	U	0.957	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Pb-214	pCi/g	0.03811	0.0911	0.0912	1.96	0.0724	U	0.161	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Pb-212	pCi/g	-0.0343	0.0733	0.0735	1.96	0.0936	U	0.198	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Eu-154	pCi/g	0.05737	0.154	0.154	1.96	0.0515		0.111	U	30
MB 160-524240/1-A	QC_BLK	MB 160-524240/1-A	Soil	Th-232	pCi/g	0.1584	0.110	0.111	1.96	0.0365		0.115		30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Cs-137	pCi/g	0.00	0.0131	0.0131	1.96	0.0277	U	0.0683	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Co-60	pCi/g	-0.004496	0.0746	0.0746	1.96	0.0374	U	0.0931	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	K-40	pCi/g	0.4077	0.853	0.854	1.96	0.3878		0.960	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Na-22	pCi/g	-0.02825	0.0664	0.0665	1.96	0.0511	U	0.120	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Zn-65	pCi/g	-0.0217	0.183	0.183	1.96	0.151	U	0.334	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Ra-226	pCi/g	-0.02352	0.190	0.190	1.96	0.159	U	0.341	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Ac-228	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-155	pCi/g	-0.08839	0.311	0.311	1.96	0.2583	U	0.534	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Am-241	pCi/g	-0.05699	0.160	0.160	1.96	0.131	U	0.277	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-152	pCi/g	0.04512	0.110	0.110	1.96	0.0757	U	0.165	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Bi-214	pCi/g	-0.02352	0.190	0.190	1.96	0.159	U	0.341	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Bi-212	pCi/g	0.4004	1.22	1.22	1.96	0.991	U	2.14	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Pb-214	pCi/g	0.05834	0.0960	0.0962	1.96	0.0717	U	0.161	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Pb-212	pCi/g	-0.04095	0.111	0.112	1.96	0.0935	U	0.199	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-154	pCi/g	-0.02492	0.0736	0.0736	1.96	0.0599	U	0.129	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Th-232	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.23	U	30
160-43124-1	SAMP	FSS-059-081821	Soil	Ni-63	pCi/g	2.08	0.792	0.82	1.96	0.584		1.22		60
160-43124-10	SAMP	HFBR-021-061821	Soil	Ni-63	pCi/g	1.85	0.763	0.786	1.96	0.568		1.19		60
160-43124-11	SAMP	FSS-065-081821	Soil	Ni-63	pCi/g	1.42	0.784	0.797	1.96	0.602		1.26		60
160-43124-12	SAMP	FSS-066-081821	Soil	Ni-63	pCi/g	1.59	0.750	0.767	1.96	0.568		1.19		60
160-43124-13	SAMP	FSS-181-081821	Soil	Ni-63	pCi/g	1.82	0.784	0.806	1.96	0.590		1.24		60
160-43124-14	SAMP	FSS-067-081821	Soil	Ni-63	pCi/g	1.38	0.735	0.749	1.96	0.563		1.18		60
160-43124-15	SAMP	FSS-068-081821	Soil	Ni-63	pCi/g	1.70	0.777	0.796	1.96	0.585		1.23		60
160-43124-16	SAMP	FSS-069-081821	Soil	Ni-63	pCi/g	1.54	0.758	0.774	1.96	0.578		1.21		60
160-43124-17	SAMP	FSS-070-081821	Soil	Ni-63	pCi/g	2.47	0.758	0.799	1.96	0.539		1.13		60
160-43124-18	SAMP	FSS-071-081821	Soil	Ni-63	pCi/g	1.34	0.726	0.739	1.96	0.559		1.17		60
160-43124-19	SAMP	FSS-072-081821	Soil	Ni-63	pCi/g	1.10	0.724	0.733	1.96	0.565		1.18	U	60
160-43124-2	SAMP	FSS-259-081821	Soil	Ni-63	pCi/g	1.84	0.782	0.804	1.96	0.580		1.22		60
160-43124-2 DU	QC_DUP	160-43124-2 DU	Soil	Ni-63	pCi/g	1.73	0.775	0.795	1.96	0.580		1.22		60
160-43124-20	SAMP	FSS-073-081821	Soil	Ni-63	pCi/g	1.22	0.764	0.774	1.96	0.593		1.24	U	60
160-43124-21	SAMP	FSS-074-081821	Soil	Ni-63	pCi/g	1.25	0.734	0.745	1.96	0.562		1.18		60

160-43124-22	SAMP	FSS-075-081821	Soil	Ni-63	pCi/g	0.977	0.691	0.699	1.96	0.537		1.13	U	60
160-43124-23	SAMP	FSS-076-081821	Soil	Ni-63	pCi/g	0.933	0.944	0.949	1.96	0.754		1.57	U	60
160-43124-24	SAMP	FSS-077-081821	Soil	Ni-63	pCi/g	1.13	0.894	0.902	1.96	0.709		1.48	U	60
160-43124-25	SAMP	FSS-078-081821	Soil	Ni-63	pCi/g	0.178	0.918	0.918	1.96	0.780	U	1.63	U	60
160-43124-26	SAMP	FSS-079-081821	Soil	Ni-63	pCi/g	0.375	0.898	0.899	1.96	0.741	U	1.55	U	60
160-43124-26 DU	QC_DUP	160-43124-26 DU	Soil	Ni-63	pCi/g	-0.0220	0.86	0.86	1.96	0.718	U	1.50	U	60
160-43124-27	SAMP	FSS-279-081821	Soil	Ni-63	pCi/g	15.9	1.44	2.17	1.96	0.733		1.53		60
160-43124-28	SAMP	FSS-080-081821	Soil	Ni-63	pCi/g	0.0924	1.01	1.01	1.96	0.838	U	1.75	U	60
160-43124-29	SAMP	FSS-280-081821	Soil	Ni-63	pCi/g	0.651	0.778	0.781	1.96	0.625		1.30	U	60
160-43124-3	SAMP	FSS-060-081821	Soil	Ni-63	pCi/g	2.52	0.832	0.871	1.96	0.598		1.26		60
160-43124-30	SAMP	FSS-081-081821	Soil	Ni-63	pCi/g	0.744	0.847	0.850	1.96	0.683		1.43	U	60
160-43124-31	SAMP	FSS-281-081821	Soil	Ni-63	pCi/g	0.168	0.813	0.813	1.96	0.683	U	1.42	U	60
160-43124-4	SAMP	FSS-260-081821	Soil	Ni-63	pCi/g	1.81	0.833	0.853	1.96	0.630		1.32		60
160-43124-5	SAMP	FSS-061-081821	Soil	Ni-63	pCi/g	1.66	0.808	0.825	1.96	0.614		1.29		60
160-43124-6	SAMP	FSS-261-081821	Soil	Ni-63	pCi/g	1.57	0.793	0.809	1.96	0.606		1.27		60
160-43124-7	SAMP	FSS-062-081821	Soil	Ni-63	pCi/g	1.62	0.748	0.766	1.96	0.563		1.18		60
160-43124-8	SAMP	FSS-063-081821	Soil	Ni-63	pCi/g	1.39	0.712	0.726	1.96	0.544		1.14		60
160-43124-9	SAMP	FSS-064-081821	Soil	Ni-63	pCi/g	1.24	0.763	0.774	1.96	0.598		1.25	U	60
LCS 160-526201/2-A	QC_LCS	LCS 160-526201/2-A	Soil	Ni-63	pCi/g	17.35	1.29	2.19	1.96	0.562		1.18		60
LCS 160-526820/2-A	QC_LCS	LCS 160-526820/2-A	Soil	Ni-63	pCi/g	20.02	1.45	2.50	1.96	0.624		1.31		60
MB 160-526201/1-A	QC_BLK	MB 160-526201/1-A	Soil	Ni-63	pCi/g	2.116	0.869	0.895	1.96	0.648		1.36		60
MB 160-526820/1-A	QC_BLK	MB 160-526820/1-A	Soil	Ni-63	pCi/g	1.355	0.765	0.777	1.96	0.581		1.22		60
160-43124-1	SAMP	FSS-059-081821	Soil	Pu-241	pCi/g	2.04	1.51	1.52	1.96	1.19		2.49	U	60
160-43124-10	SAMP	HFBR-021-061821	Soil	Pu-241	pCi/g	0.752	1.31	1.31	1.96	1.03	U	2.20	U	30
160-43124-11	SAMP	FSS-065-081821	Soil	Pu-241	pCi/g	1.19	1.45	1.45	1.96	1.12		2.40	U	30
160-43124-12	SAMP	FSS-066-081821	Soil	Pu-241	pCi/g	1.43	1.38	1.38	1.96	1.05		2.25	U	30
160-43124-13	SAMP	FSS-181-081821	Soil	Pu-241	pCi/g	0.136	1.25	1.25	1.96	1.03	U	2.22	U	30
160-43124-14	SAMP	FSS-067-081821	Soil	Pu-241	pCi/g	0.741	1.31	1.31	1.96	1.03	U	2.22	U	30
160-43124-15	SAMP	FSS-068-081821	Soil	Pu-241	pCi/g	1.05	1.43	1.43	1.96	1.11	U	2.38	U	30
160-43124-16	SAMP	FSS-069-081821	Soil	Pu-241	pCi/g	-0.0507	1.42	1.42	1.96	1.18	U	2.52	U	30
160-43124-17	SAMP	FSS-070-081821	Soil	Pu-241	pCi/g	0.207	1.19	1.19	1.96	0.958	U	2.06	U	30
160-43124-18	SAMP	FSS-071-081821	Soil	Pu-241	pCi/g	0.605	1.39	1.39	1.96	1.11	U	2.39	U	30
160-43124-19	SAMP	FSS-072-081821	Soil	Pu-241	pCi/g	0.400	1.40	1.40	1.96	1.15	U	2.46	U	30
160-43124-2	SAMP	FSS-259-081821	Soil	Pu-241	pCi/g	-0.602	1.22	1.22	1.96	1.06	U	2.21	U	60
160-43124-20	SAMP	FSS-073-081821	Soil	Pu-241	pCi/g	-0.319	1.33	1.33	1.96	1.11	U	2.39	U	30
160-43124-21	SAMP	FSS-074-081821	Soil	Pu-241	pCi/g	1.15	1.49	1.50	1.96	1.15	U	2.48	U	30
160-43124-22	SAMP	FSS-075-081821	Soil	Pu-241	pCi/g	0.311	1.54	1.54	1.96	1.25	U	2.68	U	30
160-43124-23	SAMP	FSS-076-081821	Soil	Pu-241	pCi/g	0.0867	1.63	1.63	1.96	1.36	U	2.93	U	30
160-43124-24	SAMP	FSS-077-081821	Soil	Pu-241	pCi/g	0.685	1.53	1.53	1.96	1.23	U	2.64	U	30
160-43124-25	SAMP	FSS-078-081821	Soil	Pu-241	pCi/g	0.610	1.39	1.39	1.96	1.10	U	2.37	U	30
160-43124-26	SAMP	FSS-079-081821	Soil	Pu-241	pCi/g	0.272	1.34	1.34	1.96	1.08	U	2.33	U	30
160-43124-27	SAMP	FSS-279-081821	Soil	Pu-241	pCi/g	1.46	1.62	1.62	1.96	1.30		2.74	U	60
160-43124-27 DU	QC_DUP	160-43124-27 DU	Soil	Pu-241	pCi/g	0.8748	1.33	1.33	1.96	1.07	U	2.24	U	60
160-43124-28	SAMP	FSS-080-081821	Soil	Pu-241	pCi/g	-0.294	1.20	1.20	1.96	1.01	U	2.13	U	60
160-43124-29	SAMP	FSS-280-081821	Soil	Pu-241	pCi/g	-0.0548	1.33	1.33	1.96	1.11	U	2.33	U	60
160-43124-3	SAMP	FSS-060-081821	Soil	Pu-241	pCi/g	-0.269	1.54	1.54	1.96	1.31	U	2.75	U	60
160-43124-30	SAMP	FSS-081-081821	Soil	Pu-241	pCi/g	0.432	1.38	1.38	1.96	1.13	U	2.37	U	60
160-43124-31	SAMP	FSS-281-081821	Soil	Pu-241	pCi/g	0.713	1.28	1.28	1.96	1.02	U	2.15	U	60
160-43124-4	SAMP	FSS-260-081821	Soil	Pu-241	pCi/g	-0.105	1.22	1.22	1.96	1.04	U	2.17	U	60
160-43124-5	SAMP	FSS-061-081821	Soil	Pu-241	pCi/g	0.587	1.17	1.17	1.96	0.960	U	2.01	U	60
160-43124-6	SAMP	FSS-261-081821	Soil	Pu-241	pCi/g	-0.385	1.1	1.1	1.96	0.942	U	1.97	U	60
160-43124-6 DU	QC_DUP	160-43124-6 DU	Soil	Pu-241	pCi/g	-0.1104	1.31	1.31	1.96	1.12	U	2.34	U	60
160-43124-7	SAMP	FSS-062-081821	Soil	Pu-241	pCi/g	1.88	1.31	1.32	1.96	0.972		2.09	U	30
160-43124-7 DU	QC_DUP	160-43124-7 DU	Soil	Pu-241	pCi/g	0.949	1.30	1.30	1.96	1.01	U	2.17	U	30
160-43124-8	SAMP	FSS-063-081821	Soil	Pu-241	pCi/g	0.118	1.24	1.24	1.96	1.01	U	2.17	U	30
160-43124-9	SAMP	FSS-064-081821	Soil	Pu-241	pCi/g	1.90	1.46	1.47	1.96	1.10		2.35	U	30
LCS 160-525000/2-A	QC_LCS	LCS 160-525000/2-A	Soil	Pu-241	pCi/g	19.34	1.87	2.53	1.96	0.933		1.96		60
LCS 160-525620/2-A	QC_LCS	LCS 160-525620/2-A	Soil	Pu-241	pCi/g	22.91	2.47	3.19	1.96	1.05		2.25		30
LCS 160-525621/2-A	QC_LCS	LCS 160-525621/2-A	Soil	Pu-241	pCi/g	25.63	2.81	3.61	1.96	1.48		3.12		60
MB 160-525000/1-A	QC_BLK	MB 160-525000/1-A	Soil	Pu-241	pCi/g	-0.2839	1.08	1.08	1.96	0.925	U	1.94	U	60
MB 160-525620/1-A	QC_BLK	MB 160-525620/1-A	Soil	Pu-241	pCi/g	0.5572	1.38	1.38	1.96	1.10	U	2.36	U	30
MB 160-525621/1-A	QC_BLK	MB 160-525621/1-A	Soil	Pu-241	pCi/g	0.3016	1.35	1.35	1.96	1.13	U	2.37	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43154-1	SAMP	FSS-082-081921	Soil	Sr-90	pCi/g	-0.0898	0.157	0.157	1.96	0.140	U	0.304	U	200
160-43154-10	SAMP	FSS-091-081921	Soil	Sr-90	pCi/g	0.193	0.167	0.168	1.96	0.124		0.273	U	200
160-43154-11	SAMP	FSS-092-081921	Soil	Sr-90	pCi/g	-0.148	0.179	0.180	1.96	0.162	U	0.349	U	200
160-43154-12	SAMP	FSS-093-081921	Soil	Sr-90	pCi/g	0.567	0.238	0.242	1.96	0.158		0.346		200
160-43154-2	SAMP	FSS-083-081921	Soil	Sr-90	pCi/g	0.0228	0.154	0.154	1.96	0.127	U	0.279	U	200
160-43154-3	SAMP	FSS-084-081921	Soil	Sr-90	pCi/g	-0.0957	0.169	0.169	1.96	0.149	U	0.324	U	200
160-43154-7	SAMP	FSS-085-081921	Soil	Sr-90	pCi/g	0.0182	0.183	0.183	1.96	0.153	U	0.330	U	200
160-43154-8	SAMP	FSS-086-081921	Soil	Sr-90	pCi/g	0.212	0.200	0.200	1.96	0.152		0.330	U	200
160-43154-9	SAMP	FSS-087-081921	Soil	Sr-90	pCi/g	-0.017	0.154	0.154	1.96	0.131	U	0.287	U	200
LCS 160-527652/2-A	QC_LCS	LCS 160-527652/2-A	Soil	Sr-90	pCi/g	7.087	0.477	0.743	1.96	0.120		0.262		200
MB 160-527652/1-A	QC_BLK	MB 160-527652/1-A	Soil	Sr-90	pCi/g	0.01279	0.165	0.165	1.96	0.138	U	0.299	U	200
160-43154-1	SAMP	FSS-082-081921	Soil	H-3	pCi/g	-0.239	0.271	0.272	1.96	0.244	U	0.526	U	20
160-43154-1 DU	QC_DUP	160-43154-1 DU	Soil	H-3	pCi/g	-0.1281	0.263	0.263	1.96	0.230	U	0.497	U	20
160-43154-10	SAMP	FSS-091-081921	Soil	H-3	pCi/g	-0.185	0.26	0.261	1.96	0.231	U	0.498	U	20
160-43154-11	SAMP	FSS-092-081921	Soil	H-3	pCi/g	-0.322	0.247	0.249	1.96	0.229	U	0.494	U	20
160-43154-11 MS	QC_MS	160-43154-11 MS	Soil	H-3	pCi/g	6.794	0.632	0.862	1.96	0.238		0.512		20
160-43154-12	SAMP	FSS-093-081921	Soil	H-3	pCi/g	-0.251	0.256	0.257	1.96	0.231	U	0.499	U	20
160-43154-2	SAMP	FSS-083-081921	Soil	H-3	pCi/g	-0.367	0.258	0.260	1.96	0.243	U	0.523	U	20
160-43154-3	SAMP	FSS-084-081921	Soil	H-3	pCi/g	-0.295	0.252	0.254	1.96	0.233	U	0.501	U	20
160-43154-7	SAMP	FSS-085-081921	Soil	H-3	pCi/g	-0.239	0.260	0.261	1.96	0.236	U	0.507	U	20
160-43154-8	SAMP	FSS-086-081921	Soil	H-3	pCi/g	-0.233	0.250	0.251	1.96	0.224	U	0.483	U	20
160-43154-9	SAMP	FSS-087-081921	Soil	H-3	pCi/g	-0.190	0.261	0.262	1.96	0.233	U	0.502	U	20
LCS 160-526292/2-A	QC_LCS	LCS 160-526292/2-A	Soil	H-3	pCi/g	7.021	0.610	0.860	1.96	0.218		0.469		20
MB 160-526292/1-A	QC_BLK	MB 160-526292/1-A	Soil	H-3	pCi/g	-0.09009	0.274	0.274	1.96	0.236	U	0.509	U	20
160-43154-1	SAMP	FSS-082-081921	Soil	Pu-238	pCi/g	-0.0316	0.0347	0.0348	1.96	0.0410	U	0.111	U	240
160-43154-1	SAMP	FSS-082-081921	Soil	Pu-239/Pu-240	pCi/g	-0.0122	0.0238	0.0239	1.96	0.0268	U	0.0829	U	240
160-43154-10	SAMP	FSS-091-081921	Soil	Pu-238	pCi/g	-0.0183	0.0305	0.0305	1.96	0.0354	U	0.107	U	240
160-43154-10	SAMP	FSS-091-081921	Soil	Pu-239/Pu-240	pCi/g	0.0275	0.0427	0.0428	1.96	0.0194		0.0755	U	240
160-43154-11	SAMP	FSS-092-081921	Soil	Pu-238	pCi/g	-0.0228	0.0169	0.0170	1.96	0.0316	U	0.102	U	240
160-43154-11	SAMP	FSS-092-081921	Soil	Pu-239/Pu-240	pCi/g	0.00976	0.0263	0.0263	1.96	0.0120	U	0.063	U	240
160-43154-12	SAMP	FSS-093-081921	Soil	Pu-238	pCi/g	0.00984	0.0289	0.0289	1.96	0.0181	U	0.0657	U	240
160-43154-12	SAMP	FSS-093-081921	Soil	Pu-239/Pu-240	pCi/g	0.00738	0.0199	0.0199	1.96	0.0091	U	0.0476	U	240
160-43154-2	SAMP	FSS-083-081921	Soil	Pu-238	pCi/g	0.00460	0.0278	0.0278	1.96	0.0207	U	0.0691	U	240
160-43154-2	SAMP	FSS-083-081921	Soil	Pu-239/Pu-240	pCi/g	0.0253	0.0316	0.0317	1.96	0.0085		0.0446	U	240
160-43154-3	SAMP	FSS-084-081921	Soil	Pu-238	pCi/g	0.00443	0.0184	0.0184	1.96	0.0115	U	0.0496	U	240
160-43154-3	SAMP	FSS-084-081921	Soil	Pu-239/Pu-240	pCi/g	-0.0111	0.00971	0.00975	1.96	0.0182	U	0.0630	U	240
160-43154-7	SAMP	FSS-085-081921	Soil	Pu-238	pCi/g	-0.00274	0.00537	0.00538	1.96	0.0101	U	0.0531	U	240
160-43154-7	SAMP	FSS-085-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00275	0.00538	0.00539	1.96	0.0101	U	0.0531	U	240
160-43154-8	SAMP	FSS-086-081921	Soil	Pu-238	pCi/g	0.0109	0.0322	0.0322	1.96	0.0201	U	0.0731	U	240
160-43154-8	SAMP	FSS-086-081921	Soil	Pu-239/Pu-240	pCi/g	0.00821	0.0221	0.0221	1.96	0.0101	U	0.0530	U	240
160-43154-9	SAMP	FSS-087-081921	Soil	Pu-238	pCi/g	0.00411	0.0171	0.0171	1.96	0.0107	U	0.0460	U	240
160-43154-9	SAMP	FSS-087-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00205	0.0185	0.0185	1.96	0.0169	U	0.0585	U	240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-238	pCi/g	5.842	0.462	0.667	1.96	0.0313		0.0909		240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-239/Pu-240	pCi/g	5.786	0.459	0.661	1.96	0.0151		0.0585		240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-238	pCi/g	0.001978	0.0298	0.0298	1.96	0.0241	U	0.0720	U	240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-239/Pu-240	pCi/g	0.003959	0.0165	0.0165	1.96	0.0103	U	0.0444	U	240
160-43154-1	SAMP	FSS-082-081921	Soil	U-233/U-234	pCi/g	0.157	0.0783	0.0793	1.96	0.0153		0.0596		240
160-43154-1	SAMP	FSS-082-081921	Soil	U-235/U-236	pCi/g	0.024	0.0332	0.0333	1.96	0.0110		0.0360	U	240
160-43154-1	SAMP	FSS-082-081921	Soil	U-238	pCi/g	0.190	0.0844	0.0859	1.96	0.0088		0.0465		240
160-43154-10	SAMP	FSS-091-081921	Soil	U-233/U-234	pCi/g	0.119	0.0741	0.0747	1.96	0.0233		0.0776		240
160-43154-10	SAMP	FSS-091-081921	Soil	U-235/U-236	pCi/g	0.0225	0.0362	0.0362	1.96	0.0118		0.0622	U	240
160-43154-10	SAMP	FSS-091-081921	Soil	U-238	pCi/g	0.131	0.0765	0.0772	1.96	0.0212		0.0733		240
160-43154-11	SAMP	FSS-092-081921	Soil	U-233/U-234	pCi/g	0.237	0.109	0.110	1.96	0.0247		0.0853		240
160-43154-11	SAMP	FSS-092-081921	Soil	U-235/U-236	pCi/g	0.0261	0.042	0.0421	1.96	0.0137		0.0722	U	240
160-43154-11	SAMP	FSS-092-081921	Soil	U-238	pCi/g	0.138	0.0858	0.0866	1.96	0.0270		0.0898		240
160-43154-12	SAMP	FSS-093-081921	Soil	U-233/U-234	pCi/g	0.0996	0.0736	0.0741	1.96	0.0346		0.0984		240
160-43154-12	SAMP	FSS-093-081921	Soil	U-235/U-236	pCi/g	0.00	0.00593	0.00593	1.96	0.0111	U	0.0363	U	240
160-43154-12	SAMP	FSS-093-081921	Soil	U-238	pCi/g	0.267	0.101	0.103	1.96	0.0126		0.0543		240
160-43154-2	SAMP	FSS-083-081921	Soil	U-233/U-234	pCi/g	0.167	0.0799	0.0811	1.96	0.0171		0.0621		240
160-43154-2	SAMP	FSS-083-081921	Soil	U-235/U-236	pCi/g	0.00867	0.0234	0.0234	1.96	0.0106	U	0.0560	U	240
160-43154-2	SAMP	FSS-083-081921	Soil	U-238	pCi/g	0.267	0.098	0.100	1.96	0.0085		0.0449		240
160-43154-3	SAMP	FSS-084-081921	Soil	U-233/U-234	pCi/g	0.157	0.0752	0.0763	1.96	0.0215		0.0678		240

160-43154-3	SAMP	FSS-084-081921	Soil	U-235/U-236	pCi/g	-0.00257	0.00504	0.00505	1.96	0.0095	U	0.0498	U	240
160-43154-3	SAMP	FSS-084-081921	Soil	U-238	pCi/g	0.122	0.0628	0.0636	1.96	0.0076		0.0399		240
160-43154-7	SAMP	FSS-085-081921	Soil	U-233/U-234	pCi/g	0.257	0.100	0.102	1.96	0.0156		0.0607		240
160-43154-7	SAMP	FSS-085-081921	Soil	U-235/U-236	pCi/g	0.00	0.00598	0.00598	1.96	0.0112	U	0.0366	U	240
160-43154-7	SAMP	FSS-085-081921	Soil	U-238	pCi/g	0.164	0.0793	0.0804	1.96	0.0090		0.0474		240
160-43154-8	SAMP	FSS-086-081921	Soil	U-233/U-234	pCi/g	0.175	0.099	0.100	1.96	0.0441		0.12		240
160-43154-8	SAMP	FSS-086-081921	Soil	U-235/U-236	pCi/g	-0.00326	0.00638	0.00639	1.96	0.0120	U	0.0630	U	240
160-43154-8	SAMP	FSS-086-081921	Soil	U-238	pCi/g	0.227	0.0988	0.101	1.96	0.0215		0.0743		240
160-43154-9	SAMP	FSS-087-081921	Soil	U-233/U-234	pCi/g	0.124	0.0729	0.0737	1.96	0.0295		0.0846		240
160-43154-9	SAMP	FSS-087-081921	Soil	U-235/U-236	pCi/g	-0.0133	0.0261	0.0261	1.96	0.0294	U	0.0908	U	240
160-43154-9	SAMP	FSS-087-081921	Soil	U-238	pCi/g	0.107	0.0607	0.0613	1.96	0.0111		0.0479		240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-233/U-234	pCi/g	6.194	0.442	0.675	1.96	0.0076		0.0398		240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-238	pCi/g	5.982	0.434	0.657	1.96	0.0107		0.0459		240
160-43154-1	SAMP	FSS-082-081921	Soil	C-14	pCi/g	-0.0400	0.572	0.572	1.96	0.483	U	1.03	U	20
160-43154-1 DU	QC_DUP	160-43154-1 DU	Soil	C-14	pCi/g	-0.1802	0.766	0.766	1.96	0.654	U	1.39	U	20
160-43154-1 MS	QC_MS	160-43154-1 MS	Soil	C-14	pCi/g	81.27	2.96	9.10	1.96	0.624		1.33		20
160-43154-10	SAMP	FSS-091-081921	Soil	C-14	pCi/g	0.271	0.74	0.740	1.96	0.607	U	1.29	U	20
160-43154-11	SAMP	FSS-092-081921	Soil	C-14	pCi/g	-0.0940	0.666	0.666	1.96	0.564	U	1.20	U	20
160-43154-12	SAMP	FSS-093-081921	Soil	C-14	pCi/g	0.243	0.808	0.808	1.96	0.669	U	1.42	U	20
160-43154-2	SAMP	FSS-083-081921	Soil	C-14	pCi/g	0.304	0.700	0.701	1.96	0.571	U	1.21	U	20
160-43154-3	SAMP	FSS-084-081921	Soil	C-14	pCi/g	0.977	0.838	0.844	1.96	0.650		1.38	U	20
160-43154-7	SAMP	FSS-085-081921	Soil	C-14	pCi/g	0.162	0.515	0.515	1.96	0.423	U	0.899	U	20
160-43154-8	SAMP	FSS-086-081921	Soil	C-14	pCi/g	0.423	0.551	0.553	1.96	0.440	U	0.934	U	20
160-43154-9	SAMP	FSS-087-081921	Soil	C-14	pCi/g	0.405	0.802	0.803	1.96	0.651	U	1.38	U	20
LCS 160-527842/2-A	QC_LCS	LCS 160-527842/2-A	Soil	C-14	pCi/g	82.72	3.04	9.27	1.96	0.650		1.38		20
MB 160-527842/1-A	QC_BLK	MB 160-527842/1-A	Soil	C-14	pCi/g	0.7523	0.826	0.830	1.96	0.652		1.39	U	20
160-43154-1	SAMP	FSS-082-081921	Soil	Cs-137	pCi/g	0.1	0.0389	0.0402	1.96	0.0116		0.0314		30
160-43154-1	SAMP	FSS-082-081921	Soil	Co-60	pCi/g	-0.00727	0.0645	0.0645	1.96	0.0332	U	0.0783	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	K-40	pCi/g	3.54	0.845	0.916	1.96	0.279		0.678		30
160-43154-1	SAMP	FSS-082-081921	Soil	Na-22	pCi/g	-0.00703	0.0397	0.0397	1.96	0.0321	U	0.0756	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Zn-65	pCi/g	-0.0139	0.146	0.146	1.96	0.112	U	0.244	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Ra-226	pCi/g	0.334	0.108	0.113	1.96	0.0432		0.101		30
160-43154-1	SAMP	FSS-082-081921	Soil	Ac-228	pCi/g	0.528	0.151	0.160	1.96	0.0262		0.0828		30
160-43154-1	SAMP	FSS-082-081921	Soil	Eu-155	pCi/g	0.0572	0.126	0.126	1.96	0.172	U	0.355	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Am-241	pCi/g	-0.00465	0.163	0.163	1.96	0.137	U	0.283	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Eu-152	pCi/g	0.0634	0.0375	0.038	1.96	0.0864	U	0.181	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Bi-214	pCi/g	0.334	0.108	0.113	1.96	0.0432		0.101		30
160-43154-1	SAMP	FSS-082-081921	Soil	Bi-212	pCi/g	0.368	0.69	0.691	1.96	0.5482	U	1.20	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Pb-214	pCi/g	0.325	0.0894	0.0953	1.96	0.0459		0.104		30
160-43154-1	SAMP	FSS-082-081921	Soil	Pb-212	pCi/g	0.376	0.0797	0.0928	1.96	0.0392		0.0862		30
160-43154-1	SAMP	FSS-082-081921	Soil	Eu-154	pCi/g	0.0651	0.0984	0.0987	1.96	0.0486		0.103	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Th-232	pCi/g	0.528	0.151	0.160	1.96	0.0262		0.0828		30
160-43154-10	SAMP	FSS-091-081921	Soil	Cs-137	pCi/g	0.187	0.0562	0.0594	1.96	0.0180		0.0444		30
160-43154-10	SAMP	FSS-091-081921	Soil	Co-60	pCi/g	0.0166	0.0496	0.0496	1.96	0.0244	U	0.061	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	K-40	pCi/g	3.37	1.07	1.13	1.96	0.4521		1.03		30
160-43154-10	SAMP	FSS-091-081921	Soil	Na-22	pCi/g	0.00729	0.0301	0.0301	1.96	0.0236	U	0.059	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Zn-65	pCi/g	-0.0674	0.0863	0.0865	1.96	0.117	U	0.256	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Ra-226	pCi/g	0.399	0.118	0.125	1.96	0.0466		0.108		30
160-43154-10	SAMP	FSS-091-081921	Soil	Ac-228	pCi/g	0.423	0.131	0.138	1.96	0.0587		0.149		30
160-43154-10	SAMP	FSS-091-081921	Soil	Eu-155	pCi/g	0.0317	0.0869	0.0869	1.96	0.115	U	0.241	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Am-241	pCi/g	-0.0637	0.175	0.175	1.96	0.145	U	0.300	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Eu-152	pCi/g	0.0901	0.176	0.177	1.96	0.0818		0.172	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Bi-214	pCi/g	0.399	0.118	0.125	1.96	0.0466		0.108		30
160-43154-10	SAMP	FSS-091-081921	Soil	Bi-212	pCi/g	-0.505	0.873	0.874	1.96	0.698	U	1.50	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Pb-214	pCi/g	0.388	0.106	0.113	1.96	0.0381		0.0884		30
160-43154-10	SAMP	FSS-091-081921	Soil	Pb-212	pCi/g	0.395	0.0864	0.0999	1.96	0.0453		0.0986		30
160-43154-10	SAMP	FSS-091-081921	Soil	Eu-154	pCi/g	0.0517	0.0655	0.0657	1.96	0.0636	U	0.133	U	30
160-43154-10	SAMP	FSS-091-081921	Soil	Th-232	pCi/g	0.423	0.131	0.138	1.96	0.0587		0.149		30
160-43154-11	SAMP	FSS-092-081921	Soil	Cs-137	pCi/g	0.256	0.0556	0.0614	1.96	0.0123		0.0316		30
160-43154-11	SAMP	FSS-092-081921	Soil	Co-60	pCi/g	0.013	0.0247	0.0248	1.96	0.0211	U	0.0524	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	K-40	pCi/g	2.79	1.05	1.09	1.96	0.457		1.02		30
160-43154-11	SAMP	FSS-092-081921	Soil	Na-22	pCi/g	-0.0391	0.0538	0.0539	1.96	0.0407	U	0.0913	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Zn-65	pCi/g	0.000499	0.113	0.113	1.96	0.0946	U	0.207	U	30

160-43154-11	SAMP	FSS-092-081921	Soil	Ra-226	pCi/g	0.286	0.0874	0.0921	1.96	0.0384		0.0889		30
160-43154-11	SAMP	FSS-092-081921	Soil	Ac-228	pCi/g	0.323	0.129	0.133	1.96	0.0714		0.169		30
160-43154-11	SAMP	FSS-092-081921	Soil	Eu-155	pCi/g	0.025	0.0885	0.0885	1.96	0.108	U	0.225	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Am-241	pCi/g	-0.0624	0.0488	0.0492	1.96	0.0779	U	0.164	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Eu-152	pCi/g	0.0446	0.0685	0.0686	1.96	0.0679	U	0.143	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Bi-214	pCi/g	0.286	0.0874	0.0921	1.96	0.0384		0.0889		30
160-43154-11	SAMP	FSS-092-081921	Soil	Bi-212	pCi/g	0.00	0.313	0.313	1.96	0.406	U	0.898	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Pb-214	pCi/g	0.202	0.106	0.108	1.96	0.0766		0.163		30
160-43154-11	SAMP	FSS-092-081921	Soil	Pb-212	pCi/g	0.405	0.0670	0.0844	1.96	0.0214		0.0496		30
160-43154-11	SAMP	FSS-092-081921	Soil	Eu-154	pCi/g	0.0486	0.0705	0.0707	1.96	0.0421		0.0891	U	30
160-43154-11	SAMP	FSS-092-081921	Soil	Th-232	pCi/g	0.323	0.129	0.133	1.96	0.0714		0.169		30
160-43154-12	SAMP	FSS-093-081921	Soil	Cs-137	pCi/g	0.152	0.0648	0.0665	1.96	0.0264		0.0626		30
160-43154-12	SAMP	FSS-093-081921	Soil	Co-60	pCi/g	0.00174	0.0575	0.0575	1.96	0.0290	U	0.0722	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	K-40	pCi/g	4.37	1.12	1.20	1.96	0.3007		0.744		30
160-43154-12	SAMP	FSS-093-081921	Soil	Na-22	pCi/g	0.00169	0.0338	0.0338	1.96	0.0280	U	0.0698	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Zn-65	pCi/g	0.00	0.0177	0.0177	1.96	0.103	U	0.231	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Ra-226	pCi/g	0.447	0.145	0.151	1.96	0.0697		0.157		30
160-43154-12	SAMP	FSS-093-081921	Soil	Ac-228	pCi/g	0.297	0.206	0.208	1.96	0.100		0.237		30
160-43154-12	SAMP	FSS-093-081921	Soil	Eu-155	pCi/g	0.0804	0.311	0.312	1.96	0.260	U	0.533	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Am-241	pCi/g	0.0585	0.164	0.164	1.96	0.136	U	0.282	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Eu-152	pCi/g	-0.0164	0.0367	0.0368	1.96	0.0821	U	0.174	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Bi-214	pCi/g	0.447	0.145	0.151	1.96	0.0697		0.157		30
160-43154-12	SAMP	FSS-093-081921	Soil	Bi-212	pCi/g	-0.325	0.797	0.797	1.96	0.640	U	1.40	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Pb-214	pCi/g	0.244	0.114	0.116	1.96	0.1042		0.223		30
160-43154-12	SAMP	FSS-093-081921	Soil	Pb-212	pCi/g	0.379	0.0896	0.0977	1.96	0.0460		0.101		30
160-43154-12	SAMP	FSS-093-081921	Soil	Eu-154	pCi/g	0.0749	0.132	0.132	1.96	0.0616		0.130	U	30
160-43154-12	SAMP	FSS-093-081921	Soil	Th-232	pCi/g	0.297	0.206	0.208	1.96	0.100		0.237		30
160-43154-2	SAMP	FSS-083-081921	Soil	Cs-137	pCi/g	0.144	0.0415	0.044	1.96	0.0072		0.0227		30
160-43154-2	SAMP	FSS-083-081921	Soil	Co-60	pCi/g	-0.0357	0.0833	0.0834	1.96	0.0416	U	0.0953	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	K-40	pCi/g	3.58	0.86	0.932	1.96	0.286		0.693		30
160-43154-2	SAMP	FSS-083-081921	Soil	Na-22	pCi/g	-0.00144	0.0281	0.0281	1.96	0.0232	U	0.0581	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Zn-65	pCi/g	0.00587	0.136	0.136	1.96	0.114	U	0.248	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Ra-226	pCi/g	0.0526	0.183	0.183	1.96	0.165	U	0.345	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Ac-228	pCi/g	0.145	0.159	0.16	1.96	0.116		0.263	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Eu-155	pCi/g	0.0268	0.0846	0.0846	1.96	0.172	U	0.356	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Am-241	pCi/g	-0.0559	0.168	0.168	1.96	0.139	U	0.289	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Eu-152	pCi/g	0.0855	0.138	0.138	1.96	0.0722		0.153	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Bi-214	pCi/g	0.0526	0.183	0.183	1.96	0.165	U	0.345	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Bi-212	pCi/g	0.00	0.400	0.400	1.96	0.6803	U	1.46	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Pb-214	pCi/g	0.334	0.0966	0.102	1.96	0.0376		0.0871		30
160-43154-2	SAMP	FSS-083-081921	Soil	Pb-212	pCi/g	0.381	0.081	0.0943	1.96	0.0397		0.0873		30
160-43154-2	SAMP	FSS-083-081921	Soil	Eu-154	pCi/g	0.029	0.0591	0.0592	1.96	0.0480	U	0.102	U	30
160-43154-2	SAMP	FSS-083-081921	Soil	Th-232	pCi/g	0.145	0.159	0.160	1.96	0.116		0.263	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Cs-137	pCi/g	0.0569	0.0219	0.0226	1.96	0.0051		0.0161		30
160-43154-3	SAMP	FSS-084-081921	Soil	Co-60	pCi/g	0.00341	0.00655	0.00656	1.96	0.0252	U	0.0591	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	K-40	pCi/g	3.89	0.746	0.841	1.96	0.217		0.521		30
160-43154-3	SAMP	FSS-084-081921	Soil	Na-22	pCi/g	-0.0197	0.0328	0.0328	1.96	0.0243	U	0.0571	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Zn-65	pCi/g	-0.0615	0.125	0.125	1.96	0.100	U	0.216	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Ra-226	pCi/g	0.186	0.0785	0.0807	1.96	0.0391		0.0884		30
160-43154-3	SAMP	FSS-084-081921	Soil	Ac-228	pCi/g	0.232	0.0946	0.0974	1.96	0.0428		0.108		30
160-43154-3	SAMP	FSS-084-081921	Soil	Eu-155	pCi/g	-0.0533	0.123	0.123	1.96	0.103	U	0.214	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Am-241	pCi/g	0.0459	0.105	0.105	1.96	0.0862	U	0.179	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Eu-152	pCi/g	0.0501	0.069	0.0692	1.96	0.0587	U	0.123	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Bi-214	pCi/g	0.186	0.0785	0.0807	1.96	0.0391		0.0884		30
160-43154-3	SAMP	FSS-084-081921	Soil	Bi-212	pCi/g	-0.134	0.462	0.463	1.96	0.376	U	0.824	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Pb-214	pCi/g	0.174	0.0567	0.0594	1.96	0.0425		0.0934		30
160-43154-3	SAMP	FSS-084-081921	Soil	Pb-212	pCi/g	0.292	0.0693	0.0786	1.96	0.0308		0.0672		30
160-43154-3	SAMP	FSS-084-081921	Soil	Eu-154	pCi/g	0.026	0.0479	0.048	1.96	0.0389	U	0.082	U	30
160-43154-3	SAMP	FSS-084-081921	Soil	Th-232	pCi/g	0.232	0.0946	0.0974	1.96	0.0428		0.108		30
160-43154-7	SAMP	FSS-085-081921	Soil	Cs-137	pCi/g	0.0657	0.0235	0.0244	1.96	0.0051		0.0161		30
160-43154-7	SAMP	FSS-085-081921	Soil	Co-60	pCi/g	0.0107	0.037	0.037	1.96	0.0178	U	0.0444	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	K-40	pCi/g	2.40	0.609	0.654	1.96	0.217		0.521		30
160-43154-7	SAMP	FSS-085-081921	Soil	Na-22	pCi/g	0.0103	0.0233	0.0233	1.96	0.0172	U	0.0428	U	30

160-43154-7	SAMP	FSS-085-081921	Soil	Zn-65	pCi/g	0.00	0.0572	0.0572	1.96	0.0802	U	0.175	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Ra-226	pCi/g	0.208	0.0721	0.0752	1.96	0.0335		0.0773		30
160-43154-7	SAMP	FSS-085-081921	Soil	Ac-228	pCi/g	0.383	0.114	0.120	1.96	0.0605		0.143		30
160-43154-7	SAMP	FSS-085-081921	Soil	Eu-155	pCi/g	-0.0657	0.117	0.117	1.96	0.176	U	0.361	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Am-241	pCi/g	0.00673	0.100	0.100	1.96	0.0839	U	0.175	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Eu-152	pCi/g	0.067	0.0929	0.0932	1.96	0.0479		0.102	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Bi-214	pCi/g	0.208	0.0721	0.0752	1.96	0.0335		0.0773		30
160-43154-7	SAMP	FSS-085-081921	Soil	Bi-212	pCi/g	0.181	0.430	0.431	1.96	0.343	U	0.758	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Pb-214	pCi/g	0.243	0.0700	0.0743	1.96	0.0323		0.0732		30
160-43154-7	SAMP	FSS-085-081921	Soil	Pb-212	pCi/g	0.278	0.0586	0.0684	1.96	0.0292		0.0640		30
160-43154-7	SAMP	FSS-085-081921	Soil	Eu-154	pCi/g	0.0294	0.0314	0.0316	1.96	0.0402	U	0.0846	U	30
160-43154-7	SAMP	FSS-085-081921	Soil	Th-232	pCi/g	0.383	0.114	0.120	1.96	0.0605		0.143		30
160-43154-8	SAMP	FSS-086-081921	Soil	Cs-137	pCi/g	0.0250	0.0476	0.0476	1.96	0.0370	U	0.0832	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Co-60	pCi/g	-0.0389	0.096	0.096	1.96	0.0467	U	0.107	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	K-40	pCi/g	4.11	0.880	0.969	1.96	0.114		0.361		30
160-43154-8	SAMP	FSS-086-081921	Soil	Na-22	pCi/g	-0.00157	0.0442	0.0442	1.96	0.0369	U	0.0864	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Zn-65	pCi/g	-0.00724	0.119	0.119	1.96	0.0994	U	0.222	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Ra-226	pCi/g	0.3	0.115	0.119	1.96	0.0591		0.134		30
160-43154-8	SAMP	FSS-086-081921	Soil	Ac-228	pCi/g	0.505	0.198	0.205	1.96	0.0658		0.166		30
160-43154-8	SAMP	FSS-086-081921	Soil	Eu-155	pCi/g	-1.79E-08	0.298	0.298	1.96	0.250	U	0.514	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Am-241	pCi/g	0.0616	0.148	0.149	1.96	0.122	U	0.255	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Eu-152	pCi/g	0.0207	0.0269	0.027	1.96	0.0872	U	0.184	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Bi-214	pCi/g	0.300	0.115	0.119	1.96	0.0591		0.134		30
160-43154-8	SAMP	FSS-086-081921	Soil	Bi-212	pCi/g	-0.384	0.826	0.827	1.96	0.6630	U	1.44	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Pb-214	pCi/g	0.243	0.121	0.123	1.96	0.0616		0.136		30
160-43154-8	SAMP	FSS-086-081921	Soil	Pb-212	pCi/g	0.313	0.0792	0.0855	1.96	0.0411		0.0907		30
160-43154-8	SAMP	FSS-086-081921	Soil	Eu-154	pCi/g	0.0829	0.106	0.106	1.96	0.0582		0.123	U	30
160-43154-8	SAMP	FSS-086-081921	Soil	Th-232	pCi/g	0.505	0.198	0.205	1.96	0.0658		0.166		30
160-43154-9	SAMP	FSS-087-081921	Soil	Cs-137	pCi/g	0.0224	0.0463	0.0464	1.96	0.0362	U	0.0813	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Co-60	pCi/g	0.030	0.0222	0.0224	1.96	0.0111		0.0352	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	K-40	pCi/g	2.93	1.08	1.12	1.96	0.477		1.08		30
160-43154-9	SAMP	FSS-087-081921	Soil	Na-22	pCi/g	-0.0169	0.0453	0.0453	1.96	0.0352	U	0.0828	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Zn-65	pCi/g	-0.00458	0.0910	0.0910	1.96	0.106	U	0.234	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Ra-226	pCi/g	0.504	0.133	0.143	1.96	0.0437		0.103		30
160-43154-9	SAMP	FSS-087-081921	Soil	Ac-228	pCi/g	0.488	0.218	0.223	1.96	0.0876		0.209		30
160-43154-9	SAMP	FSS-087-081921	Soil	Eu-155	pCi/g	0.0574	0.132	0.132	1.96	0.172	U	0.357	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Am-241	pCi/g	-0.0693	0.191	0.191	1.96	0.158	U	0.327	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Eu-152	pCi/g	0.116	0.167	0.168	1.96	0.0691		0.147	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Bi-214	pCi/g	0.504	0.133	0.143	1.96	0.0437		0.103		30
160-43154-9	SAMP	FSS-087-081921	Soil	Bi-212	pCi/g	0.00	0.192	0.192	1.96	0.483	U	1.07	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Pb-214	pCi/g	0.401	0.0944	0.103	1.96	0.0382		0.0892		30
160-43154-9	SAMP	FSS-087-081921	Soil	Pb-212	pCi/g	0.432	0.0849	0.101	1.96	0.0372		0.0828		30
160-43154-9	SAMP	FSS-087-081921	Soil	Eu-154	pCi/g	0.0678	0.119	0.119	1.96	0.0568		0.120	U	30
160-43154-9	SAMP	FSS-087-081921	Soil	Th-232	pCi/g	0.488	0.218	0.223	1.96	0.0876		0.209		30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Cs-137	pCi/g	0.00	0.00492	0.00492	1.96	0.0403	U	0.0873	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Co-60	pCi/g	0.01843	0.0162	0.0163	1.96	0.0086		0.0272	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	K-40	pCi/g	3.905	0.747	0.843	1.96	0.0867		0.274		30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Na-22	pCi/g	0.02136	0.0171	0.0172	1.96	0.0083		0.0262	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Zn-65	pCi/g	0.00	0.0124	0.0124	1.96	0.0920	U	0.201	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Ra-226	pCi/g	0.2532	0.101	0.104	1.96	0.0508		0.113		30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Ac-228	pCi/g	0.2065	0.167	0.168	1.96	0.0982		0.222	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Eu-155	pCi/g	-0.07754	0.241	0.241	1.96	0.201	U	0.411	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Am-241	pCi/g	0.01979	0.107	0.107	1.96	0.0675	U	0.143	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Eu-152	pCi/g	0.05854	0.0972	0.0974	1.96	0.0657	U	0.138	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Bi-214	pCi/g	0.2532	0.101	0.104	1.96	0.0508		0.113		30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Bi-212	pCi/g	0.1136	0.541	0.541	1.96	0.445	U	0.972	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Pb-214	pCi/g	0.3225	0.0722	0.0793	1.96	0.0282		0.0662		30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Pb-212	pCi/g	0.04314	0.0984	0.0986	1.96	0.0811	U	0.169	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Eu-154	pCi/g	0.02712	0.0583	0.0584	1.96	0.0431	U	0.0911	U	30
160-43154-9 DU	QC_DUP	160-43154-9 DU	Soil	Th-232	pCi/g	0.2065	0.167	0.168	1.96	0.0982		0.222	U	30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Cs-137	pCi/g	25.88	0.621	2.71	1.96	0.0883		0.186		30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Co-60	pCi/g	8.348	0.288	0.870	1.96	0.0121		0.0382		30
LCS 160-524254/2-A	QC_LCS	LCS 160-524254/2-A	Soil	Am-241	pCi/g	93.85	1.54	9.67	1.96	0.568		1.15		30

LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Cs-137	pCi/g	26.96	0.641	2.82	1.96	0.107		0.224		30
LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Co-60	pCi/g	8.926	0.296	0.927	1.96	0.0318		0.0771		30
LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Am-241	pCi/g	102.4	1.58	10.5	1.96	0.579		1.17		30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Cs-137	pCi/g	0.02007	0.0439	0.044	1.96	0.0335	U	0.0785	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Co-60	pCi/g	-0.04662	0.0944	0.0946	1.96	0.0463	U	0.109	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	K-40	pCi/g	-0.08877	0.453	0.453	1.96	0.389	U	0.945	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Na-22	pCi/g	0.003918	0.0388	0.0388	1.96	0.0316	U	0.0792	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Zn-65	pCi/g	-0.005834	0.0676	0.0676	1.96	0.0755	U	0.179	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Ra-226	pCi/g	0.02344	0.0352	0.0353	1.96	0.152	U	0.324	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Ac-228	pCi/g	0.01134	0.0360	0.0360	1.96	0.111	U	0.265	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-155	pCi/g	-0.06081	0.170	0.170	1.96	0.138	U	0.292	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Am-241	pCi/g	-0.05574	0.140	0.141	1.96	0.115	U	0.243	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-152	pCi/g	0.09335	0.061	0.0617	1.96	0.0688		0.149	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Bi-214	pCi/g	0.02344	0.0352	0.0353	1.96	0.152	U	0.324	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Bi-212	pCi/g	0.1406	0.810	0.811	1.96	0.667	U	1.47	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Pb-214	pCi/g	0.006017	0.107	0.107	1.96	0.0898	U	0.196	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Pb-212	pCi/g	0.001236	0.0978	0.0978	1.96	0.0817	U	0.174	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-154	pCi/g	0.01668	0.0319	0.032	1.96	0.0583	U	0.125	U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Th-232	pCi/g	0.01134	0.036	0.036	1.96	0.111	U	0.265	U	30
160-43154-1	SAMP	FSS-082-081921	Soil	Ni-63	pCi/g	0.624	0.804	0.807	1.96	0.648	U	1.35	U	60
160-43154-10	SAMP	FSS-091-081921	Soil	Ni-63	pCi/g	-0.184	0.838	0.839	1.96	0.718	U	1.50	U	60
160-43154-11	SAMP	FSS-092-081921	Soil	Ni-63	pCi/g	0.225	0.806	0.806	1.96	0.670	U	1.40	U	60
160-43154-12	SAMP	FSS-093-081921	Soil	Ni-63	pCi/g	-0.277	0.886	0.887	1.96	0.753	U	1.57	U	60
160-43154-2	SAMP	FSS-083-081921	Soil	Ni-63	pCi/g	0.438	0.843	0.844	1.96	0.695	U	1.45	U	60
160-43154-3	SAMP	FSS-084-081921	Soil	Ni-63	pCi/g	0.742	0.777	0.781	1.96	0.623		1.30	U	60
160-43154-7	SAMP	FSS-085-081921	Soil	Ni-63	pCi/g	0.596	0.884	0.886	1.96	0.719	U	1.50	U	60
160-43154-8	SAMP	FSS-086-081921	Soil	Ni-63	pCi/g	0.677	0.894	0.897	1.96	0.719	U	1.50	U	60
160-43154-9	SAMP	FSS-087-081921	Soil	Ni-63	pCi/g	0.919	0.925	0.929	1.96	0.740		1.54	U	60
LCS 160-527389/2-A	QC_LCS	LCS 160-527389/2-A	Soil	Ni-63	pCi/g	21.68	1.86	2.89	1.96	0.926		1.93		60
MB 160-527389/1-A	QC_BLK	MB 160-527389/1-A	Soil	Ni-63	pCi/g	0.7503	1.00	1.01	1.96	0.828	U	1.73	U	60
160-43154-1	SAMP	FSS-082-081921	Soil	Pu-241	pCi/g	1.15	1.53	1.53	1.96	1.26	U	2.66	U	60
160-43154-10	SAMP	FSS-091-081921	Soil	Pu-241	pCi/g	-1.60	1.50	1.51	1.96	1.21	U	2.55	U	60
160-43154-11	SAMP	FSS-092-081921	Soil	Pu-241	pCi/g	-0.933	1.67	1.67	1.96	1.32	U	2.79	U	60
160-43154-12	SAMP	FSS-093-081921	Soil	Pu-241	pCi/g	-1.49	1.19	1.20	1.96	0.977	U	2.05	U	60
160-43154-2	SAMP	FSS-083-081921	Soil	Pu-241	pCi/g	0.532	1.40	1.40	1.96	1.19	U	2.49	U	60
160-43154-3	SAMP	FSS-084-081921	Soil	Pu-241	pCi/g	0.409	1.53	1.53	1.96	1.26	U	2.66	U	60
160-43154-7	SAMP	FSS-085-081921	Soil	Pu-241	pCi/g	-1.08	1.38	1.38	1.96	1.11	U	2.33	U	60
160-43154-8	SAMP	FSS-086-081921	Soil	Pu-241	pCi/g	-2.28	1.29	1.31	1.96	1.10	U	2.31	U	60
160-43154-9	SAMP	FSS-087-081921	Soil	Pu-241	pCi/g	-1.34	1.01	1.02	1.96	0.825	U	1.74	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43154-4	SAMP	FSS-088-081921	Soil	Sr-90	pCi/g	0.00818	0.164	0.164	1.96	0.137	U	0.298	U	200
160-43154-5	SAMP	FSS-089-081921	Soil	Sr-90	pCi/g	-0.00339	0.173	0.173	1.96	0.145	U	0.316	U	200
160-43154-6	SAMP	FSS-090-081921	Soil	Sr-90	pCi/g	-0.00337	0.157	0.157	1.96	0.132	U	0.289	U	200
160-43154-4	SAMP	FSS-088-081921	Soil	H-3	pCi/g	-0.435	0.235	0.238	1.96	0.229	U	0.494	U	20
160-43154-5	SAMP	FSS-089-081921	Soil	H-3	pCi/g	-0.27	0.254	0.255	1.96	0.232	U	0.499	U	20
160-43154-6	SAMP	FSS-090-081921	Soil	H-3	pCi/g	-0.334	0.238	0.240	1.96	0.222	U	0.479	U	20
160-43154-4	SAMP	FSS-088-081921	Soil	Pu-238	pCi/g	0.00882	0.0173	0.0173	1.96	0.00811		0.0265	U	240
160-43154-4	SAMP	FSS-088-081921	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00433	0.00433	1.96	0.00812	U	0.0265	U	240
160-43154-5	SAMP	FSS-089-081921	Soil	Pu-238	pCi/g	-0.00249	0.00488	0.00489	1.96	0.00916	U	0.0482	U	240
160-43154-5	SAMP	FSS-089-081921	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00489	0.00489	1.96	0.00917	U	0.0299	U	240
160-43154-6	SAMP	FSS-090-081921	Soil	Pu-238	pCi/g	-0.0159	0.0266	0.0266	1.96	0.0309	U	0.0937	U	240
160-43154-6	SAMP	FSS-090-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00798	0.00903	0.00906	1.96	0.0169	U	0.0658	U	240
160-43154-4	SAMP	FSS-088-081921	Soil	U-233/U-234	pCi/g	0.179	0.0923	0.0934	1.96	0.0350		0.0995		240
160-43154-4	SAMP	FSS-088-081921	Soil	U-235/U-236	pCi/g	-0.0122	0.0120	0.0120	1.96	0.0225	U	0.0817	U	240
160-43154-4	SAMP	FSS-088-081921	Soil	U-238	pCi/g	0.123	0.076	0.0767	1.96	0.0285		0.0865		240
160-43154-5	SAMP	FSS-089-081921	Soil	U-233/U-234	pCi/g	0.122	0.0707	0.0714	1.96	0.0158		0.0615		240
160-43154-5	SAMP	FSS-089-081921	Soil	U-235/U-236	pCi/g	0.0124	0.0242	0.0243	1.96	0.0114		0.0371	U	240
160-43154-5	SAMP	FSS-089-081921	Soil	U-238	pCi/g	0.181	0.0852	0.0864	1.96	0.0158		0.0614		240
160-43154-6	SAMP	FSS-090-081921	Soil	U-233/U-234	pCi/g	0.158	0.0879	0.0889	1.96	0.0295		0.0911		240
160-43154-6	SAMP	FSS-090-081921	Soil	U-235/U-236	pCi/g	-0.0166	0.0146	0.0147	1.96	0.0274	U	0.0947	U	240
160-43154-6	SAMP	FSS-090-081921	Soil	U-238	pCi/g	0.0801	0.0597	0.0600	1.96	0.0139		0.0598		240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-233/U-234	pCi/g	0.01076	0.0313	0.0313	1.96	0.0210	U	0.0677	U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-235/U-236	pCi/g	0.005358	0.0223	0.0223	1.96	0.0139	U	0.0600	U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-238	pCi/g	0.004297	0.026	0.026	1.96	0.0194	U	0.0645	U	240
160-43154-4	SAMP	FSS-088-081921	Soil	C-14	pCi/g	0.125	0.773	0.774	1.96	0.6418	U	1.36	U	20
160-43154-5	SAMP	FSS-089-081921	Soil	C-14	pCi/g	0.223	0.721	0.722	1.96	0.5919	U	1.26	U	20
160-43154-6	SAMP	FSS-090-081921	Soil	C-14	pCi/g	0.400	0.700	0.702	1.96	0.5658	U	1.20	U	20
160-43154-4	SAMP	FSS-088-081921	Soil	Cs-137	pCi/g	-0.00887	0.0643	0.0643	1.96	0.0533	U	0.116	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Co-60	pCi/g	-0.0044	0.0175	0.0175	1.96	0.0379	U	0.0888	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	K-40	pCi/g	3.26	0.780	0.844	1.96	0.113		0.358		30
160-43154-4	SAMP	FSS-088-081921	Soil	Na-22	pCi/g	0.0124	0.0460	0.0461	1.96	0.0366	U	0.0859	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Zn-65	pCi/g	0.00	0.0327	0.0327	1.96	0.0673	U	0.157	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Ra-226	pCi/g	0.362	0.124	0.129	1.96	0.0522		0.12		30
160-43154-4	SAMP	FSS-088-081921	Soil	Ac-228	pCi/g	0.532	0.148	0.157	1.96	0.0292		0.0924		30
160-43154-4	SAMP	FSS-088-081921	Soil	Eu-155	pCi/g	0.00	0.0995	0.0995	1.96	0.2662	U	0.545	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Am-241	pCi/g	0.0612	0.145	0.145	1.96	0.120	U	0.249	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Eu-152	pCi/g	0.0962	0.134	0.135	1.96	0.198	U	0.414	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Bi-214	pCi/g	0.362	0.124	0.129	1.96	0.0522		0.120		30
160-43154-4	SAMP	FSS-088-081921	Soil	Bi-212	pCi/g	-0.300	0.662	0.662	1.96	0.5253	U	1.16	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Pb-214	pCi/g	0.380	0.0949	0.102	1.96	0.0476		0.108		30
160-43154-4	SAMP	FSS-088-081921	Soil	Pb-212	pCi/g	0.438	0.0871	0.0979	1.96	0.0398		0.0880		30
160-43154-4	SAMP	FSS-088-081921	Soil	Eu-154	pCi/g	0.0172	0.0750	0.0750	1.96	0.0527	U	0.112	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Th-232	pCi/g	0.532	0.148	0.157	1.96	0.0292		0.0924		30
160-43154-5	SAMP	FSS-089-081921	Soil	Cs-137	pCi/g	-0.0348	0.0548	0.0549	1.96	0.0435	U	0.0936	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Co-60	pCi/g	0.0275	0.0149	0.0151	1.96	0.0199		0.0495	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	K-40	pCi/g	3.00	0.712	0.773	1.96	0.242		0.582		30
160-43154-5	SAMP	FSS-089-081921	Soil	Na-22	pCi/g	0.0312	0.0204	0.0206	1.96	0.0081		0.0255		30
160-43154-5	SAMP	FSS-089-081921	Soil	Zn-65	pCi/g	0.0574	0.107	0.108	1.96	0.0848	U	0.186	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Ra-226	pCi/g	0.219	0.0774	0.0805	1.96	0.0401		0.0918		30
160-43154-5	SAMP	FSS-089-081921	Soil	Ac-228	pCi/g	0.450	0.107	0.116	1.96	0.0477		0.120		30
160-43154-5	SAMP	FSS-089-081921	Soil	Eu-155	pCi/g	0.0141	0.0603	0.0603	1.96	0.189	U	0.387	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Am-241	pCi/g	0.0461	0.0931	0.0932	1.96	0.0758	U	0.159	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Eu-152	pCi/g	0.0962	0.0858	0.0864	1.96	0.0668		0.140	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Bi-214	pCi/g	0.219	0.0774	0.0805	1.96	0.0401		0.0918		30
160-43154-5	SAMP	FSS-089-081921	Soil	Bi-212	pCi/g	0.222	0.473	0.474	1.96	0.375	U	0.829	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Pb-214	pCi/g	0.276	0.0849	0.0894	1.96	0.0367		0.0829		30
160-43154-5	SAMP	FSS-089-081921	Soil	Pb-212	pCi/g	0.0317	0.0783	0.0784	1.96	0.0643	U	0.135	U	30
160-43154-5	SAMP	FSS-089-081921	Soil	Eu-154	pCi/g	0.129	0.0527	0.0544	1.96	0.0447		0.0941		30
160-43154-5	SAMP	FSS-089-081921	Soil	Th-232	pCi/g	0.450	0.107	0.116	1.96	0.0477		0.120		30
160-43154-6	SAMP	FSS-090-081921	Soil	Cs-137	pCi/g	-0.0466	0.0762	0.0763	1.96	0.0606	U	0.130	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Co-60	pCi/g	0.00866	0.0206	0.0207	1.96	0.0269	U	0.0669	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	K-40	pCi/g	3.76	1.01	1.08	1.96	0.279		0.690		30

160-43154-6	SAMP	FSS-090-081921	Soil	Na-22	pCi/g	0.0375	0.026	0.0262	1.96	0.0109		0.0346		30
160-43154-6	SAMP	FSS-090-081921	Soil	Zn-65	pCi/g	0.00	0.0232	0.0232	1.96	0.109	U	0.240	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Ra-226	pCi/g	0.313	0.112	0.116	1.96	0.0519		0.120		30
160-43154-6	SAMP	FSS-090-081921	Soil	Ac-228	pCi/g	0.515	0.205	0.212	1.96	0.114		0.262		30
160-43154-6	SAMP	FSS-090-081921	Soil	Eu-155	pCi/g	-0.0967	0.331	0.331	1.96	0.276	U	0.565	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Am-241	pCi/g	0.0542	0.142	0.142	1.96	0.117	U	0.245	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Eu-152	pCi/g	0.095	0.0777	0.0783	1.96	0.0955	U	0.200	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Bi-214	pCi/g	0.313	0.112	0.116	1.96	0.0519		0.120		30
160-43154-6	SAMP	FSS-090-081921	Soil	Bi-212	pCi/g	0.442	0.842	0.843	1.96	0.672	U	1.46	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Pb-214	pCi/g	0.245	0.0948	0.0979	1.96	0.0486		0.110		30
160-43154-6	SAMP	FSS-090-081921	Soil	Pb-212	pCi/g	0.305	0.0763	0.0824	1.96	0.0379		0.0843		30
160-43154-6	SAMP	FSS-090-081921	Soil	Eu-154	pCi/g	0.0395	0.0649	0.065	1.96	0.0608	U	0.128	U	30
160-43154-6	SAMP	FSS-090-081921	Soil	Th-232	pCi/g	0.515	0.205	0.212	1.96	0.114		0.262		30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Cs-137	pCi/g	0.00	0.0131	0.0131	1.96	0.0277	U	0.0683	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Co-60	pCi/g	-0.004496	0.0746	0.0746	1.96	0.0374	U	0.0931	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	K-40	pCi/g	0.4077	0.853	0.854	1.96	0.3878		0.960	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Na-22	pCi/g	-0.02825	0.0664	0.0665	1.96	0.0511	U	0.120	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Zn-65	pCi/g	-0.0217	0.183	0.183	1.96	0.151	U	0.334	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Ra-226	pCi/g	-0.02352	0.190	0.190	1.96	0.159	U	0.341	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Ac-228	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.23	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-155	pCi/g	-0.08839	0.311	0.311	1.96	0.258	U	0.534	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Am-241	pCi/g	-0.05699	0.160	0.160	1.96	0.131	U	0.277	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-152	pCi/g	0.04512	0.110	0.110	1.96	0.0757	U	0.165	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Bi-214	pCi/g	-0.02352	0.190	0.190	1.96	0.159	U	0.341	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Bi-212	pCi/g	0.4004	1.22	1.22	1.96	0.991	U	2.14	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Pb-214	pCi/g	0.05834	0.0960	0.0962	1.96	0.0717	U	0.161	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Pb-212	pCi/g	-0.04095	0.111	0.112	1.96	0.0935	U	0.199	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Eu-154	pCi/g	-0.02492	0.0736	0.0736	1.96	0.0599	U	0.129	U	30
MB 160-524254/1-A	QC_BLK	MB 160-524254/1-A	Soil	Th-232	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
160-43154-4	SAMP	FSS-088-081921	Soil	Ni-63	pCi/g	0.303	0.675	0.676	1.96	0.554	U	1.16	U	60
160-43154-5	SAMP	FSS-089-081921	Soil	Ni-63	pCi/g	0.327	0.978	0.978	1.96	0.830	U	1.73	U	60
160-43154-6	SAMP	FSS-090-081921	Soil	Ni-63	pCi/g	-0.0922	0.767	0.767	1.96	0.643	U	1.34	U	60
LCS 160-526820/2-A	QC_LCS	LCS 160-526820/2-A	Soil	Ni-63	pCi/g	20.02	1.45	2.50	1.96	0.624		1.31		60
MB 160-526820/1-A	QC_BLK	MB 160-526820/1-A	Soil	Ni-63	pCi/g	1.355	0.765	0.777	1.96	0.581		1.22		60
160-43154-4	SAMP	FSS-088-081921	Soil	Pu-241	pCi/g	-0.636	1.09	1.09	1.96	0.845	U	1.78	U	60
160-43154-5	SAMP	FSS-089-081921	Soil	Pu-241	pCi/g	-1.30	1.25	1.25	1.96	1.02	U	2.14	U	60
160-43154-6	SAMP	FSS-090-081921	Soil	Pu-241	pCi/g	-1.55	1.30	1.31	1.96	1.06	U	2.23	U	60
LCS 160-525621/2-A	QC_LCS	LCS 160-525621/2-A	Soil	Pu-241	pCi/g	25.63	2.81	3.61	1.96	1.48		3.12		60
MB 160-525621/1-A	QC_BLK	MB 160-525621/1-A	Soil	Pu-241	pCi/g	0.3016	1.35	1.35	1.96	1.13	U	2.37	U	60

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43157-1	SAMP	FSS-094-081921	Soil	Sr-90	pCi/g	-0.0253	0.159	0.159	1.96	0.135	U	0.294	U	200
160-43157-1 DU	QC_DUP	160-43157-1 DU	Soil	Sr-90	pCi/g	-0.1436	0.120	0.120	1.96	0.115	U	0.253	U	200
160-43157-10	SAMP	FSS-100-082021	Soil	Sr-90	pCi/g	0.109	0.190	0.190	1.96	0.151	U	0.328	U	200
160-43157-11	SAMP	FSS-101-082021	Soil	Sr-90	pCi/g	-0.0137	0.159	0.159	1.96	0.135	U	0.295	U	200
160-43157-12	SAMP	FSS-102-082021	Soil	Sr-90	pCi/g	-0.0967	0.147	0.147	1.96	0.131	U	0.286	U	200
160-43157-13	SAMP	FSS-103-082021	Soil	Sr-90	pCi/g	0.103	0.163	0.163	1.96	0.128	U	0.280	U	200
160-43157-14	SAMP	FSS-104-082021	Soil	Sr-90	pCi/g	-0.147	0.144	0.145	1.96	0.134	U	0.292	U	200
160-43157-15	SAMP	FSS-105-082021	Soil	Sr-90	pCi/g	-0.0433	0.154	0.154	1.96	0.133	U	0.290	U	200
160-43157-16	SAMP	FSS-106-082021	Soil	Sr-90	pCi/g	-0.0831	0.139	0.139	1.96	0.124	U	0.274	U	200
160-43157-17	SAMP	FSS-107-082021	Soil	Sr-90	pCi/g	0.0305	0.165	0.165	1.96	0.136	U	0.297	U	200
160-43157-18	SAMP	FSS-108-082021	Soil	Sr-90	pCi/g	-0.0886	0.154	0.154	1.96	0.137	U	0.299	U	200
160-43157-19	SAMP	FSS-109-082021	Soil	Sr-90	pCi/g	0.274	0.159	0.161	1.96	0.109		0.242		200
160-43157-2	SAMP	FSS-095-081921	Soil	Sr-90	pCi/g	0.0484	0.135	0.135	1.96	0.109	U	0.242	U	200
160-43157-20	SAMP	FSS-110-082021	Soil	Sr-90	pCi/g	0.132	0.159	0.160	1.96	0.123		0.269	U	200
160-43157-21	SAMP	FSS-111-082021	Soil	Sr-90	pCi/g	-0.0892	0.192	0.192	1.96	0.167	U	0.360	U	200
160-43157-21 DU	QC_DUP	160-43157-21 DU	Soil	Sr-90	pCi/g	-0.211	0.167	0.168	1.96	0.157	U	0.340	U	200
160-43157-22	SAMP	FSS-112-082021	Soil	Sr-90	pCi/g	0.0346	0.171	0.171	1.96	0.140	U	0.307	U	200
160-43157-23	SAMP	FSS-113-082021	Soil	Sr-90	pCi/g	0.0865	0.176	0.176	1.96	0.141	U	0.307	U	200
160-43157-24	SAMP	FSS-114-082021	Soil	Sr-90	pCi/g	-0.0197	0.180	0.180	1.96	0.153	U	0.333	U	200
160-43157-3	SAMP	FSS-096-081921	Soil	Sr-90	pCi/g	0.106	0.164	0.164	1.96	0.128	U	0.282	U	200
160-43157-4	SAMP	FSS-097-081921	Soil	Sr-90	pCi/g	-0.173	0.141	0.142	1.96	0.133	U	0.289	U	200
160-43157-5	SAMP	FSS-297-081921	Soil	Sr-90	pCi/g	-0.0244	0.128	0.128	1.96	0.110	U	0.243	U	200
160-43157-6	SAMP	FSS-098-082021	Soil	Sr-90	pCi/g	0.192	0.167	0.167	1.96	0.124		0.272	U	200
160-43157-7	SAMP	FSS-298-082021	Soil	Sr-90	pCi/g	0.144	0.149	0.150	1.96	0.112		0.248	U	200
160-43157-8	SAMP	FSS-099-082021	Soil	Sr-90	pCi/g	-0.112	0.135	0.135	1.96	0.124	U	0.272	U	200
160-43157-9	SAMP	FSS-299-082021	Soil	Sr-90	pCi/g	-0.0287	0.179	0.179	1.96	0.152	U	0.330	U	200
LCS 160-525828/2-A	QC_LCS	LCS 160-525828/2-A	Soil	Sr-90	pCi/g	7.118	0.881	1.05	1.96	0.334		0.736		200
LCS 160-525839/2-A	QC_LCS	LCS 160-525839/2-A	Soil	Sr-90	pCi/g	7.014	0.500	0.753	1.96	0.144		0.313		200
MB 160-525828/1-A	QC_BLK	MB 160-525828/1-A	Soil	Sr-90	pCi/g	-0.3068	0.262	0.263	1.96	0.245	U	0.533	U	200
MB 160-525839/1-A	QC_BLK	MB 160-525839/1-A	Soil	Sr-90	pCi/g	0.07208	0.199	0.199	1.96	0.162	U	0.349	U	200
160-43157-1	SAMP	FSS-094-081921	Soil	H-3	pCi/g	0.146	0.216	0.216	1.96	0.168	U	0.367	U	20
160-43157-10	SAMP	FSS-100-082021	Soil	H-3	pCi/g	0.166	0.226	0.227	1.96	0.176	U	0.386	U	20
160-43157-11	SAMP	FSS-101-082021	Soil	H-3	pCi/g	0.132	0.222	0.222	1.96	0.174	U	0.382	U	20
160-43157-11 MS	QC_MS	160-43157-11 MS	Soil	H-3	pCi/g	7.236	0.605	0.869	1.96	0.181		0.396		20
160-43157-12	SAMP	FSS-102-082021	Soil	H-3	pCi/g	0.0212	0.207	0.207	1.96	0.170	U	0.372	U	20
160-43157-13	SAMP	FSS-103-082021	Soil	H-3	pCi/g	0.134	0.220	0.220	1.96	0.177	U	0.387	U	20
160-43157-14	SAMP	FSS-104-082021	Soil	H-3	pCi/g	-0.106	0.183	0.183	1.96	0.163	U	0.357	U	20
160-43157-15	SAMP	FSS-105-082021	Soil	H-3	pCi/g	0.0975	0.217	0.217	1.96	0.178	U	0.389	U	20
160-43157-16	SAMP	FSS-106-082021	Soil	H-3	pCi/g	0.180	0.22	0.221	1.96	0.173		0.378	U	20
160-43157-17	SAMP	FSS-107-082021	Soil	H-3	pCi/g	-0.0796	0.194	0.194	1.96	0.172	U	0.377	U	20
160-43157-18	SAMP	FSS-108-082021	Soil	H-3	pCi/g	0.106	0.208	0.208	1.96	0.166	U	0.363	U	20
160-43157-19	SAMP	FSS-109-082021	Soil	H-3	pCi/g	0.0221	0.203	0.203	1.96	0.170	U	0.373	U	20
160-43157-2	SAMP	FSS-095-081921	Soil	H-3	pCi/g	0.0993	0.214	0.215	1.96	0.171	U	0.374	U	20
160-43157-20	SAMP	FSS-110-082021	Soil	H-3	pCi/g	0.0636	0.207	0.207	1.96	0.169	U	0.371	U	20
160-43157-21	SAMP	FSS-111-082021	Soil	H-3	pCi/g	-0.0171	0.194	0.194	1.96	0.165	U	0.361	U	20
160-43157-22	SAMP	FSS-112-082021	Soil	H-3	pCi/g	-0.0346	0.194	0.194	1.96	0.166	U	0.364	U	20
160-43157-23	SAMP	FSS-113-082021	Soil	H-3	pCi/g	-0.0640	0.200	0.200	1.96	0.177	U	0.388	U	20
160-43157-24	SAMP	FSS-114-082021	Soil	H-3	pCi/g	0.0635	0.207	0.208	1.96	0.171	U	0.375	U	20
160-43157-3	SAMP	FSS-096-081921	Soil	H-3	pCi/g	0.0380	0.217	0.217	1.96	0.179	U	0.393	U	20
160-43157-4	SAMP	FSS-097-081921	Soil	H-3	pCi/g	-0.00714	0.203	0.203	1.96	0.170	U	0.372	U	20
160-43157-5	SAMP	FSS-297-081921	Soil	H-3	pCi/g	-0.0079	0.205	0.205	1.96	0.171	U	0.376	U	20
160-43157-6	SAMP	FSS-098-082021	Soil	H-3	pCi/g	0.0455	0.210	0.210	1.96	0.171	U	0.375	U	20
160-43157-7	SAMP	FSS-298-082021	Soil	H-3	pCi/g	-0.0012	0.202	0.202	1.96	0.168	U	0.367	U	20
160-43157-8	SAMP	FSS-099-082021	Soil	H-3	pCi/g	-0.0653	0.195	0.195	1.96	0.166	U	0.364	U	20
160-43157-9	SAMP	FSS-299-082021	Soil	H-3	pCi/g	-0.0138	0.207	0.207	1.96	0.174	U	0.382	U	20
160-43157-9 DU	QC_DUP	160-43157-9 DU	Soil	H-3	pCi/g	0.09451	0.217	0.217	1.96	0.173	U	0.379	U	20
LCS 160-526979/2-A	QC_LCS	LCS 160-526979/2-A	Soil	H-3	pCi/g	8.256	0.641	0.958	1.96	0.181		0.397		20
LCS 160-527613/2-A	QC_LCS	LCS 160-527613/2-A	Soil	H-3	pCi/g	7.084	0.592	0.85	1.96	0.178		0.390		20
MB 160-526979/1-A	QC_BLK	MB 160-526979/1-A	Soil	H-3	pCi/g	-0.02222	0.196	0.196	1.96	0.163	U	0.3570	U	20
MB 160-527613/1-A	QC_BLK	MB 160-527613/1-A	Soil	H-3	pCi/g	0.03303	0.212	0.212	1.96	0.179	U	0.3920	U	20
160-43157-1	SAMP	FSS-094-081921	Soil	Pu-238	pCi/g	0.020	0.0367	0.0367	1.96	0.0216	U	0.0699	U	240
160-43157-1	SAMP	FSS-094-081921	Soil	Pu-239/Pu-240	pCi/g	0.00667	0.0180	0.0180	1.96	0.0082	U	0.0430	U	240

160-43157-10	SAMP	FSS-100-082021	Soil	Pu-238	pCi/g	0.00616	0.0435	0.0435	1.96	0.0346 U	0.0939 U	240
160-43157-10	SAMP	FSS-100-082021	Soil	Pu-239/Pu-240	pCi/g	-0.0103	0.0201	0.0202	1.96	0.0227 U	0.0700 U	240
160-43157-11	SAMP	FSS-101-082021	Soil	Pu-238	pCi/g	0.0314	0.0407	0.0408	1.96	0.0202	0.0672 U	240
160-43157-11	SAMP	FSS-101-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00224	0.00439	0.0044	1.96	0.0082 U	0.0434 U	240
160-43157-12	SAMP	FSS-102-082021	Soil	Pu-238	pCi/g	-0.0100	0.00877	0.00881	1.96	0.0165 U	0.0569 U	240
160-43157-12	SAMP	FSS-102-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00601	0.0068	0.00682	1.96	0.0128 U	0.0496 U	240
160-43157-13	SAMP	FSS-103-082021	Soil	Pu-238	pCi/g	0.0201	0.0279	0.0279	1.96	0.0105	0.0450 U	240
160-43157-13	SAMP	FSS-103-082021	Soil	Pu-239/Pu-240	pCi/g	-0.0101	0.00882	0.00886	1.96	0.0165 U	0.0572 U	240
160-43157-14	SAMP	FSS-104-082021	Soil	Pu-238	pCi/g	0.00	0.00356	0.00356	1.96	0.0067 U	0.0218 U	240
160-43157-14	SAMP	FSS-104-082021	Soil	Pu-239/Pu-240	pCi/g	0.00727	0.0142	0.0143	1.96	0.0067	0.0218 U	240
160-43157-15	SAMP	FSS-105-082021	Soil	Pu-238	pCi/g	0.00550	0.0148	0.0148	1.96	0.0067 U	0.0355 U	240
160-43157-15	SAMP	FSS-105-082021	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0036	0.0036	1.96	0.0068 U	0.0220 U	240
160-43157-16	SAMP	FSS-106-082021	Soil	Pu-238	pCi/g	-0.00191	0.00375	0.00375	1.96	0.0070 U	0.0370 U	240
160-43157-16	SAMP	FSS-106-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00575	0.0065	0.00652	1.96	0.0122 U	0.0474 U	240
160-43157-17	SAMP	FSS-107-082021	Soil	Pu-238	pCi/g	-0.0059	0.00667	0.00669	1.96	0.0125 U	0.0486 U	240
160-43157-17	SAMP	FSS-107-082021	Soil	Pu-239/Pu-240	pCi/g	0.00393	0.0164	0.0164	1.96	0.0102 U	0.0441 U	240
160-43157-18	SAMP	FSS-108-082021	Soil	Pu-238	pCi/g	-0.00175	0.00343	0.00344	1.96	0.0064 U	0.0339 U	240
160-43157-18	SAMP	FSS-108-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00175	0.00344	0.00344	1.96	0.0064 U	0.0339 U	240
160-43157-19	SAMP	FSS-109-082021	Soil	Pu-238	pCi/g	-0.00812	0.00796	0.00798	1.96	0.0149 U	0.0542 U	240
160-43157-19	SAMP	FSS-109-082021	Soil	Pu-239/Pu-240	pCi/g	0.00609	0.0164	0.0164	1.96	0.0075 U	0.0393 U	240
160-43157-2	SAMP	FSS-095-081921	Soil	Pu-238	pCi/g	-0.0136	0.0133	0.0134	1.96	0.0250 U	0.0910 U	240
160-43157-2	SAMP	FSS-095-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00341	0.00668	0.00669	1.96	0.0125 U	0.0660 U	240
160-43157-20	SAMP	FSS-110-082021	Soil	Pu-238	pCi/g	-0.00379	0.00526	0.00527	1.96	0.0099 U	0.0425 U	240
160-43157-20	SAMP	FSS-110-082021	Soil	Pu-239/Pu-240	pCi/g	-0.0019	0.0170	0.0171	1.96	0.0156 U	0.0540 U	240
160-43157-21	SAMP	FSS-111-082021	Soil	Pu-238	pCi/g	0.00381	0.0284	0.0284	1.96	0.0221 U	0.0671 U	240
160-43157-21	SAMP	FSS-111-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00571	0.00647	0.00648	1.96	0.0121 U	0.0471 U	240
160-43157-22	SAMP	FSS-112-082021	Soil	Pu-238	pCi/g	0.00200	0.0245	0.0245	1.96	0.0195 U	0.0629 U	240
160-43157-22	SAMP	FSS-112-082021	Soil	Pu-239/Pu-240	pCi/g	0.00601	0.0162	0.0162	1.96	0.0074 U	0.0388 U	240
160-43157-23	SAMP	FSS-113-082021	Soil	Pu-238	pCi/g	0.0272	0.0367	0.0367	1.96	0.0167	0.0606 U	240
160-43157-23	SAMP	FSS-113-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00227	0.00445	0.00445	1.96	0.0084 U	0.0439 U	240
160-43157-24	SAMP	FSS-114-082021	Soil	Pu-238	pCi/g	0.0227	0.0315	0.0316	1.96	0.0118	0.0510 U	240
160-43157-24	SAMP	FSS-114-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00228	0.0204	0.0204	1.96	0.0187 U	0.0648 U	240
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Pu-238	pCi/g	-0.02092	0.0130	0.0131	1.96	0.0243 U	0.0738 U	240
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Pu-239/Pu-240	pCi/g	-0.006282	0.00711	0.00713	1.96	0.0133 U	0.0518 U	240
160-43157-3	SAMP	FSS-096-081921	Soil	Pu-238	pCi/g	0.0253	0.0465	0.0466	1.96	0.0274 U	0.0886 U	240
160-43157-3	SAMP	FSS-096-081921	Soil	Pu-239/Pu-240	pCi/g	0.00846	0.0228	0.0228	1.96	0.0104 U	0.0546 U	240
160-43157-4	SAMP	FSS-097-081921	Soil	Pu-238	pCi/g	-0.00797	0.0191	0.0191	1.96	0.0207 U	0.0653 U	240
160-43157-4	SAMP	FSS-097-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00199	0.00391	0.00391	1.96	0.0073 U	0.0386 U	240
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	Pu-238	pCi/g	0.01348	0.0217	0.0217	1.96	0.0071	0.0373 U	240
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	Pu-239/Pu-240	pCi/g	0.003856	0.016	0.0160	1.96	0.0100 U	0.0432 U	240
160-43157-5	SAMP	FSS-297-081921	Soil	Pu-238	pCi/g	-0.0156	0.0266	0.0266	1.96	0.0288 U	0.0810 U	240
160-43157-5	SAMP	FSS-297-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00783	0.0255	0.0255	1.96	0.0249 U	0.0734 U	240
160-43157-6	SAMP	FSS-098-082021	Soil	Pu-238	pCi/g	-0.0037	0.00513	0.00514	1.96	0.0096 U	0.0415 U	240
160-43157-6	SAMP	FSS-098-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00185	0.00363	0.00364	1.96	0.0068 U	0.0359 U	240
160-43157-7	SAMP	FSS-298-082021	Soil	Pu-238	pCi/g	0.0209	0.0289	0.0290	1.96	0.0109	0.0468 U	240
160-43157-7	SAMP	FSS-298-082021	Soil	Pu-239/Pu-240	pCi/g	-0.00836	0.00819	0.00822	1.96	0.0154 U	0.0558 U	240
160-43157-8	SAMP	FSS-099-082021	Soil	Pu-238	pCi/g	-0.00189	0.0170	0.0170	1.96	0.0156 U	0.0538 U	240
160-43157-8	SAMP	FSS-099-082021	Soil	Pu-239/Pu-240	pCi/g	0.00758	0.0149	0.0149	1.96	0.0070	0.0227 U	240
160-43157-9	SAMP	FSS-299-082021	Soil	Pu-238	pCi/g	0.0204	0.038	0.0381	1.96	0.0238 U	0.0721 U	240
160-43157-9	SAMP	FSS-299-082021	Soil	Pu-239/Pu-240	pCi/g	0.00409	0.0247	0.0247	1.96	0.0184 U	0.0614 U	240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-238	pCi/g	5.842	0.462	0.667	1.96	0.0313	0.0909	240
LCS 160-525615/2-A	QC_LCS	LCS 160-525615/2-A	Soil	Pu-239/Pu-240	pCi/g	5.786	0.459	0.661	1.96	0.0151	0.0585	240
LCS 160-525760/2-A	QC_LCS	LCS 160-525760/2-A	Soil	Pu-238	pCi/g	5.421	0.397	0.597	1.96	0.0250	0.0725	240
LCS 160-525760/2-A	QC_LCS	LCS 160-525760/2-A	Soil	Pu-239/Pu-240	pCi/g	5.219	0.389	0.580	1.96	0.0120	0.0466	240
LCS 160-526438/2-A	QC_LCS	LCS 160-526438/2-A	Soil	Pu-238	pCi/g	4.862	0.422	0.581	1.96	0.0175	0.0634	240
LCS 160-526438/2-A	QC_LCS	LCS 160-526438/2-A	Soil	Pu-239/Pu-240	pCi/g	5.311	0.441	0.621	1.96	0.0087	0.0460	240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-238	pCi/g	0.001978	0.0298	0.0298	1.96	0.0241 U	0.0720 U	240
MB 160-525615/1-A	QC_BLK	MB 160-525615/1-A	Soil	Pu-239/Pu-240	pCi/g	0.003959	0.0165	0.0165	1.96	0.0103 U	0.0444 U	240
MB 160-525760/1-A	QC_BLK	MB 160-525760/1-A	Soil	Pu-238	pCi/g	-0.005762	0.0247	0.0247	1.96	0.0234 U	0.0699 U	240
MB 160-525760/1-A	QC_BLK	MB 160-525760/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.003845	0.00533	0.00534	1.96	0.0100 U	0.0431 U	240
MB 160-526438/1-A	QC_BLK	MB 160-526438/1-A	Soil	Pu-238	pCi/g	-0.00208	0.00408	0.00408	1.96	0.0077 U	0.0403 U	240
MB 160-526438/1-A	QC_BLK	MB 160-526438/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.002082	0.00408	0.00408	1.96	0.0077 U	0.0403 U	240
160-43157-1	SAMP	FSS-094-081921	Soil	U-233/U-234	pCi/g	0.128	0.0689	0.0697	1.96	0.0179	0.0619	240

160-43157-1	SAMP	FSS-094-081921	Soil	U-235/U-236	pCi/g	0.0271	0.0375	0.0376	1.96	0.0141	0.0607 U	240
160-43157-1	SAMP	FSS-094-081921	Soil	U-238	pCi/g	0.237	0.0904	0.0925	1.96	0.0138	0.0537	240
160-43157-10	SAMP	FSS-100-082021	Soil	U-233/U-234	pCi/g	0.246	0.0941	0.0963	1.96	0.0274	0.0795	240
160-43157-10	SAMP	FSS-100-082021	Soil	U-235/U-236	pCi/g	0.00514	0.0214	0.0214	1.96	0.0134 U	0.0576 U	240
160-43157-10	SAMP	FSS-100-082021	Soil	U-238	pCi/g	0.216	0.0862	0.0880	1.96	0.0201	0.0648	240
160-43157-11	SAMP	FSS-101-082021	Soil	U-233/U-234	pCi/g	0.202	0.0789	0.0807	1.96	0.0201	0.0620	240
160-43157-11	SAMP	FSS-101-082021	Soil	U-235/U-236	pCi/g	0.0159	0.0323	0.0324	1.96	0.0186 U	0.0645 U	240
160-43157-11	SAMP	FSS-101-082021	Soil	U-238	pCi/g	0.142	0.0639	0.0650	1.96	0.0095	0.0407	240
160-43157-12	SAMP	FSS-102-082021	Soil	U-233/U-234	pCi/g	0.210	0.0907	0.0923	1.96	0.0343	0.0930	240
160-43157-12	SAMP	FSS-102-082021	Soil	U-235/U-236	pCi/g	0.0177	0.0285	0.0286	1.96	0.0093	0.049 U	240
160-43157-12	SAMP	FSS-102-082021	Soil	U-238	pCi/g	0.160	0.0735	0.0747	1.96	0.0167	0.0578	240
160-43157-13	SAMP	FSS-103-082021	Soil	U-233/U-234	pCi/g	0.270	0.0956	0.0981	1.96	0.0187	0.0624	240
160-43157-13	SAMP	FSS-103-082021	Soil	U-235/U-236	pCi/g	0.0181	0.0291	0.0292	1.96	0.0095	0.0501 U	240
160-43157-13	SAMP	FSS-103-082021	Soil	U-238	pCi/g	0.255	0.0925	0.0948	1.96	0.0171	0.0590	240
160-43157-14	SAMP	FSS-104-082021	Soil	U-233/U-234	pCi/g	0.269	0.0927	0.0953	1.96	0.0164	0.0566	240
160-43157-14	SAMP	FSS-104-082021	Soil	U-235/U-236	pCi/g	-0.00248	0.00485	0.00486	1.96	0.0091 U	0.0479 U	240
160-43157-14	SAMP	FSS-104-082021	Soil	U-238	pCi/g	0.195	0.0800	0.0816	1.96	0.0179	0.0596	240
160-43157-15	SAMP	FSS-105-082021	Soil	U-233/U-234	pCi/g	0.315	0.100	0.103	1.96	0.0266	0.0755	240
160-43157-15	SAMP	FSS-105-082021	Soil	U-235/U-236	pCi/g	0.0186	0.0257	0.0258	1.96	0.0085	0.0278 U	240
160-43157-15	SAMP	FSS-105-082021	Soil	U-238	pCi/g	0.354	0.101	0.105	1.96	0.0097	0.0417	240
160-43157-16	SAMP	FSS-106-082021	Soil	U-233/U-234	pCi/g	0.136	0.0662	0.0671	1.96	0.0158	0.0546	240
160-43157-16	SAMP	FSS-106-082021	Soil	U-235/U-236	pCi/g	-0.00478	0.00662	0.00663	1.96	0.0124 U	0.0535 U	240
160-43157-16	SAMP	FSS-106-082021	Soil	U-238	pCi/g	0.148	0.0675	0.0686	1.96	0.0122	0.0474	240
160-43157-17	SAMP	FSS-107-082021	Soil	U-233/U-234	pCi/g	0.181	0.0864	0.0877	1.96	0.0367	0.0973	240
160-43157-17	SAMP	FSS-107-082021	Soil	U-235/U-236	pCi/g	0.00	0.0218	0.0218	1.96	0.0183 U	0.0663 U	240
160-43157-17	SAMP	FSS-107-082021	Soil	U-238	pCi/g	0.173	0.0733	0.0747	1.96	0.0073	0.0385	240
160-43157-18	SAMP	FSS-108-082021	Soil	U-233/U-234	pCi/g	0.296	0.111	0.114	1.96	0.0319	0.0927	240
160-43157-18	SAMP	FSS-108-082021	Soil	U-235/U-236	pCi/g	0.0569	0.0590	0.0592	1.96	0.0246	0.0852 U	240
160-43157-18	SAMP	FSS-108-082021	Soil	U-238	pCi/g	0.238	0.0988	0.101	1.96	0.0265	0.0818	240
160-43157-19	SAMP	FSS-109-082021	Soil	U-233/U-234	pCi/g	0.306	0.0977	0.101	1.96	0.0175	0.0582	240
160-43157-19	SAMP	FSS-109-082021	Soil	U-235/U-236	pCi/g	0.00964	0.0284	0.0284	1.96	0.0177 U	0.0644 U	240
160-43157-19	SAMP	FSS-109-082021	Soil	U-238	pCi/g	0.333	0.0994	0.103	1.96	0.0071	0.0232	240
160-43157-2	SAMP	FSS-095-081921	Soil	U-233/U-234	pCi/g	0.0463	0.0823	0.0824	1.96	0.0568 U	0.151 U	240
160-43157-2	SAMP	FSS-095-081921	Soil	U-235/U-236	pCi/g	-0.0154	0.0151	0.0151	1.96	0.0283 U	0.103 U	240
160-43157-2	SAMP	FSS-095-081921	Soil	U-238	pCi/g	0.120	0.0766	0.0772	1.96	0.0113	0.0596	240
160-43157-20	SAMP	FSS-110-082021	Soil	U-233/U-234	pCi/g	0.263	0.0946	0.0971	1.96	0.0156	0.0568	240
160-43157-20	SAMP	FSS-110-082021	Soil	U-235/U-236	pCi/g	0.00529	0.0220	0.0220	1.96	0.0138 U	0.0592 U	240
160-43157-20	SAMP	FSS-110-082021	Soil	U-238	pCi/g	0.373	0.110	0.114	1.96	0.0078	0.0254	240
160-43157-21	SAMP	FSS-111-082021	Soil	U-233/U-234	pCi/g	0.178	0.0755	0.0769	1.96	0.0127	0.0495	240
160-43157-21	SAMP	FSS-111-082021	Soil	U-235/U-236	pCi/g	0.0398	0.039	0.0392	1.96	0.0092	0.0299	240
160-43157-21	SAMP	FSS-111-082021	Soil	U-238	pCi/g	0.265	0.0915	0.0940	1.96	0.0127	0.0494	240
160-43157-22	SAMP	FSS-112-082021	Soil	U-233/U-234	pCi/g	0.264	0.0910	0.0935	1.96	0.0074	0.0391	240
160-43157-22	SAMP	FSS-112-082021	Soil	U-235/U-236	pCi/g	-0.00251	0.00492	0.00493	1.96	0.0092 U	0.0486 U	240
160-43157-22	SAMP	FSS-112-082021	Soil	U-238	pCi/g	0.240	0.0866	0.0888	1.96	0.0074	0.0390	240
160-43157-23	SAMP	FSS-113-082021	Soil	U-233/U-234	pCi/g	0.267	0.0977	0.100	1.96	0.0164	0.0595	240
160-43157-23	SAMP	FSS-113-082021	Soil	U-235/U-236	pCi/g	0.0111	0.0217	0.0218	1.96	0.0102	0.0333 U	240
160-43157-23	SAMP	FSS-113-082021	Soil	U-238	pCi/g	0.151	0.0719	0.0730	1.96	0.0082	0.0267	240
160-43157-24	SAMP	FSS-114-082021	Soil	U-233/U-234	pCi/g	0.152	0.0725	0.0735	1.96	0.0155	0.0563	240
160-43157-24	SAMP	FSS-114-082021	Soil	U-235/U-236	pCi/g	0.0393	0.0414	0.0415	1.96	0.0096	0.0507 U	240
160-43157-24	SAMP	FSS-114-082021	Soil	U-238	pCi/g	0.149	0.0701	0.0711	1.96	0.0077	0.0407	240
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	U-233/U-234	pCi/g	0.1454	0.0716	0.0726	1.96	0.0157	0.0571	240
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	U-235/U-236	pCi/g	0.007985	0.0215	0.0215	1.96	0.0098 U	0.0515 U	240
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	U-238	pCi/g	0.3309	0.105	0.108	1.96	0.0079	0.0413	240
160-43157-3	SAMP	FSS-096-081921	Soil	U-233/U-234	pCi/g	0.230	0.110	0.112	1.96	0.0235	0.0854	240
160-43157-3	SAMP	FSS-096-081921	Soil	U-235/U-236	pCi/g	0.0119	0.0474	0.0474	1.96	0.0327 U	0.113 U	240
160-43157-3	SAMP	FSS-096-081921	Soil	U-238	pCi/g	0.255	0.115	0.117	1.96	0.0235	0.0852	240
160-43157-4	SAMP	FSS-097-081921	Soil	U-233/U-234	pCi/g	0.285	0.0928	0.0957	1.96	0.0181	0.0585	240
160-43157-4	SAMP	FSS-097-081921	Soil	U-235/U-236	pCi/g	0.00695	0.0187	0.0187	1.96	0.0085 U	0.0448 U	240
160-43157-4	SAMP	FSS-097-081921	Soil	U-238	pCi/g	0.282	0.0912	0.0941	1.96	0.0137	0.0496	240
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	U-233/U-234	pCi/g	0.3033	0.0994	0.102	1.96	0.0151	0.0547	240
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	U-235/U-236	pCi/g	0.01785	0.0287	0.0288	1.96	0.0094	0.0494 U	240
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	U-238	pCi/g	0.3089	0.0989	0.102	1.96	0.0075	0.0396	240
160-43157-5	SAMP	FSS-297-081921	Soil	U-233/U-234	pCi/g	0.161	0.0917	0.0926	1.96	0.0491	0.122	240

160-43157-5	SAMP	FSS-297-081921	Soil	U-235/U-236	pCi/g	-0.00752	0.0322	0.0322	1.96	0.0306 U	0.0912 U	240
160-43157-5	SAMP	FSS-297-081921	Soil	U-238	pCi/g	0.197	0.0828	0.0844	1.96	0.0234	0.0709	240
160-43157-6	SAMP	FSS-098-082021	Soil	U-233/U-234	pCi/g	0.228	0.0861	0.0882	1.96	0.0108	0.0464	240
160-43157-6	SAMP	FSS-098-082021	Soil	U-235/U-236	pCi/g	0.018	0.0290	0.0291	1.96	0.0095	0.0499 U	240
160-43157-6	SAMP	FSS-098-082021	Soil	U-238	pCi/g	0.279	0.0946	0.0974	1.96	0.0076	0.0400	240
160-43157-7	SAMP	FSS-298-082021	Soil	U-233/U-234	pCi/g	0.331	0.110	0.113	1.96	0.0283	0.0823	240
160-43157-7	SAMP	FSS-298-082021	Soil	U-235/U-236	pCi/g	0.0266	0.0368	0.0369	1.96	0.0138	0.0595 U	240
160-43157-7	SAMP	FSS-298-082021	Soil	U-238	pCi/g	0.309	0.104	0.107	1.96	0.0207	0.0671	240
160-43157-8	SAMP	FSS-099-082021	Soil	U-233/U-234	pCi/g	0.225	0.0860	0.0880	1.96	0.0132	0.0511	240
160-43157-8	SAMP	FSS-099-082021	Soil	U-235/U-236	pCi/g	0.00	0.00504	0.00504	1.96	0.0095 U	0.0309 U	240
160-43157-8	SAMP	FSS-099-082021	Soil	U-238	pCi/g	0.295	0.0971	0.100	1.96	0.0076	0.0399	240
160-43157-9	SAMP	FSS-299-082021	Soil	U-233/U-234	pCi/g	0.345	0.103	0.107	1.96	0.0144	0.0524	240
160-43157-9	SAMP	FSS-299-082021	Soil	U-235/U-236	pCi/g	0.0171	0.0275	0.0275	1.96	0.0090	0.0472 U	240
160-43157-9	SAMP	FSS-299-082021	Soil	U-238	pCi/g	0.358	0.104	0.108	1.96	0.0072	0.0379	240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-233/U-234	pCi/g	6.194	0.442	0.675	1.96	0.0076	0.0398	240
LCS 160-525622/2-A	QC_LCS	LCS 160-525622/2-A	Soil	U-238	pCi/g	5.982	0.434	0.657	1.96	0.0107	0.0459	240
LCS 160-525765/2-A	QC_LCS	LCS 160-525765/2-A	Soil	U-233/U-234	pCi/g	6.942	0.483	0.748	1.96	0.0080	0.0423	240
LCS 160-525765/2-A	QC_LCS	LCS 160-525765/2-A	Soil	U-238	pCi/g	7.135	0.489	0.764	1.96	0.0113	0.0488	240
LCS 160-526532/2-A	QC_LCS	LCS 160-526532/2-A	Soil	U-233/U-234	pCi/g	6.959	0.501	0.761	1.96	0.0122	0.0526	240
LCS 160-526532/2-A	QC_LCS	LCS 160-526532/2-A	Soil	U-238	pCi/g	7.155	0.508	0.778	1.96	0.0172	0.0625	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-233/U-234	pCi/g	0.01076	0.0313	0.0313	1.96	0.0210 U	0.0677 U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-235/U-236	pCi/g	0.005358	0.0223	0.0223	1.96	0.0139 U	0.0600 U	240
MB 160-525622/1-A	QC_BLK	MB 160-525622/1-A	Soil	U-238	pCi/g	0.004297	0.0260	0.0260	1.96	0.0194 U	0.0645 U	240
MB 160-525765/1-A	QC_BLK	MB 160-525765/1-A	Soil	U-233/U-234	pCi/g	0.003769	0.0157	0.0157	1.96	0.0098 U	0.0422 U	240
MB 160-525765/1-A	QC_BLK	MB 160-525765/1-A	Soil	U-235/U-236	pCi/g	0.00469	0.0195	0.0195	1.96	0.0122 U	0.0525 U	240
MB 160-525765/1-A	QC_BLK	MB 160-525765/1-A	Soil	U-238	pCi/g	0.01317	0.0212	0.0212	1.96	0.0069	0.0364 U	240
MB 160-526532/1-A	QC_BLK	MB 160-526532/1-A	Soil	U-233/U-234	pCi/g	0.01328	0.0253	0.0253	1.96	0.0115	0.0496 U	240
MB 160-526532/1-A	QC_BLK	MB 160-526532/1-A	Soil	U-235/U-236	pCi/g	0.03857	0.0439	0.044	1.96	0.0143	0.0617 U	240
MB 160-526532/1-A	QC_BLK	MB 160-526532/1-A	Soil	U-238	pCi/g	0.03093	0.0352	0.0353	1.96	0.0115	0.0495 U	240
160-43157-1	SAMP	FSS-094-081921	Soil	C-14	pCi/g	-0.0470	0.730	0.730	1.96	0.616 U	1.31 U	20
160-43157-1 DU	QC_DUP	160-43157-1 DU	Soil	C-14	pCi/g	-0.03436	0.708	0.708	1.96	0.596 U	1.26 U	20
160-43157-1 MS	QC_MS	160-43157-1 MS	Soil	C-14	pCi/g	76.04	2.82	8.53	1.96	0.629	1.33	20
160-43157-10	SAMP	FSS-100-082021	Soil	C-14	pCi/g	-0.705	0.749	0.753	1.96	0.669 U	1.42 U	20
160-43157-11	SAMP	FSS-101-082021	Soil	C-14	pCi/g	-0.0308	0.720	0.720	1.96	0.607 U	1.29 U	20
160-43157-12	SAMP	FSS-102-082021	Soil	C-14	pCi/g	-0.120	0.737	0.737	1.96	0.626 U	1.33 U	20
160-43157-13	SAMP	FSS-103-082021	Soil	C-14	pCi/g	-0.290	0.448	0.449	1.96	0.392 U	0.831 U	20
160-43157-14	SAMP	FSS-104-082021	Soil	C-14	pCi/g	-0.00952	0.594	0.594	1.96	0.499 U	1.06 U	20
160-43157-15	SAMP	FSS-105-082021	Soil	C-14	pCi/g	-0.690	0.603	0.608	1.96	0.543 U	1.15 U	20
160-43157-16	SAMP	FSS-106-082021	Soil	C-14	pCi/g	-0.212	0.796	0.796	1.96	0.680 U	1.44 U	20
160-43157-17	SAMP	FSS-107-082021	Soil	C-14	pCi/g	0.279	0.849	0.850	1.96	0.697 U	1.48 U	20
160-43157-17 DU	QC_DUP	160-43157-17 DU	Soil	C-14	pCi/g	-0.7432	0.790	0.794	1.96	0.704 U	1.49 U	20
160-43157-17 MS	QC_MS	160-43157-17 MS	Soil	C-14	pCi/g	64.67	2.37	7.24	1.96	0.539	1.14	20
160-43157-18	SAMP	FSS-108-082021	Soil	C-14	pCi/g	-0.631	0.796	0.798	1.96	0.703 U	1.49 U	20
160-43157-19	SAMP	FSS-109-082021	Soil	C-14	pCi/g	-0.365	0.808	0.809	1.96	0.697 U	1.47 U	20
160-43157-2	SAMP	FSS-095-081921	Soil	C-14	pCi/g	-0.223	0.768	0.768	1.96	0.656 U	1.39 U	20
160-43157-20	SAMP	FSS-110-082021	Soil	C-14	pCi/g	0.115	0.765	0.765	1.96	0.636 U	1.35 U	20
160-43157-21	SAMP	FSS-111-082021	Soil	C-14	pCi/g	-0.352	0.741	0.742	1.96	0.643 U	1.36 U	20
160-43157-22	SAMP	FSS-112-082021	Soil	C-14	pCi/g	-0.745	0.711	0.716	1.96	0.638 U	1.35 U	20
160-43157-23	SAMP	FSS-113-082021	Soil	C-14	pCi/g	-0.027	0.830	0.830	1.96	0.697 U	1.47 U	20
160-43157-24	SAMP	FSS-114-082021	Soil	C-14	pCi/g	-0.511	0.662	0.664	1.96	0.583 U	1.23 U	20
160-43157-3	SAMP	FSS-096-081921	Soil	C-14	pCi/g	-0.0686	0.798	0.798	1.96	0.674 U	1.43 U	20
160-43157-4	SAMP	FSS-097-081921	Soil	C-14	pCi/g	-0.517	0.790	0.792	1.96	0.692 U	1.47 U	20
160-43157-5	SAMP	FSS-297-081921	Soil	C-14	pCi/g	-0.330	0.679	0.680	1.96	0.588 U	1.25 U	20
160-43157-6	SAMP	FSS-098-082021	Soil	C-14	pCi/g	0.571	0.827	0.829	1.96	0.667 U	1.41 U	20
160-43157-7	SAMP	FSS-298-082021	Soil	C-14	pCi/g	-0.327	0.680	0.681	1.96	0.589 U	1.25 U	20
160-43157-8	SAMP	FSS-099-082021	Soil	C-14	pCi/g	-0.688	0.736	0.740	1.96	0.657 U	1.39 U	20
160-43157-9	SAMP	FSS-299-082021	Soil	C-14	pCi/g	-0.114	0.813	0.813	1.96	0.690 U	1.46 U	20
LCS 160-528309/2-A	QC_LCS	LCS 160-528309/2-A	Soil	C-14	pCi/g	85.02	3.15	9.53	1.96	0.707	1.50	20
LCS 160-528500/2-A	QC_LCS	LCS 160-528500/2-A	Soil	C-14	pCi/g	77.77	2.98	8.75	1.96	0.699	1.48	20
MB 160-528309/1-A	QC_BLK	MB 160-528309/1-A	Soil	C-14	pCi/g	0.02703	0.841	0.841	1.96	0.705 U	1.49 U	20
MB 160-528500/1-A	QC_BLK	MB 160-528500/1-A	Soil	C-14	pCi/g	1.14	0.911	0.919	1.96	0.709	1.50 U	20
160-43157-1	SAMP	FSS-094-081921	Soil	Cs-137	pCi/g	0.0159	0.0400	0.0401	1.96	0.0317 U	0.0714 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Co-60	pCi/g	-0.0327	0.0663	0.0663	1.96	0.0423 U	0.0964 U	30

160-43157-1	SAMP	FSS-094-081921	Soil	K-40	pCi/g	4.54	0.940	1.04	1.96	0.289	0.696	30
160-43157-1	SAMP	FSS-094-081921	Soil	Na-22	pCi/g	-0.00978	0.0411	0.0411	1.96	0.0329 U	0.0771 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Zn-65	pCi/g	0.000000007	0.122	0.122	1.96	0.103 U	0.226 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Ra-226	pCi/g	0.355	0.0921	0.0990	1.96	0.0288	0.0717	30
160-43157-1	SAMP	FSS-094-081921	Soil	Ac-228	pCi/g	0.437	0.127	0.135	1.96	0.103	0.237	30
160-43157-1	SAMP	FSS-094-081921	Soil	Eu-155	pCi/g	-0.0699	0.159	0.159	1.96	0.130 U	0.271 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Am-241	pCi/g	0.0369	0.119	0.119	1.96	0.0781 U	0.165 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Eu-152	pCi/g	0.0355	0.0709	0.0710	1.96	0.0572 U	0.122 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Bi-214	pCi/g	0.355	0.0921	0.0990	1.96	0.0288	0.0717	30
160-43157-1	SAMP	FSS-094-081921	Soil	Bi-212	pCi/g	0.420	0.791	0.792	1.96	0.633 U	1.36 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Pb-214	pCi/g	0.342	0.0787	0.0861	1.96	0.0153	0.0422	30
160-43157-1	SAMP	FSS-094-081921	Soil	Pb-212	pCi/g	0.339	0.0904	0.100	1.96	0.0440	0.0958	30
160-43157-1	SAMP	FSS-094-081921	Soil	Eu-154	pCi/g	0.0588	0.088	0.0882	1.96	0.0468	0.0992 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Th-232	pCi/g	0.437	0.127	0.135	1.96	0.103	0.237	30
160-43157-10	SAMP	FSS-100-082021	Soil	Cs-137	pCi/g	0.0386	0.0737	0.0738	1.96	0.0587 U	0.127 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Co-60	pCi/g	-0.0372	0.104	0.104	1.96	0.0510 U	0.116 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	K-40	pCi/g	4.28	1.28	1.35	1.96	0.432	1.01	30
160-43157-10	SAMP	FSS-100-082021	Soil	Na-22	pCi/g	-0.00856	0.0363	0.0363	1.96	0.0285 U	0.0709 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Zn-65	pCi/g	0.0594	0.122	0.122	1.96	0.0947 U	0.214 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Ra-226	pCi/g	0.374	0.128	0.134	1.96	0.0600	0.138	30
160-43157-10	SAMP	FSS-100-082021	Soil	Ac-228	pCi/g	0.471	0.170	0.177	1.96	0.0719	0.181	30
160-43157-10	SAMP	FSS-100-082021	Soil	Eu-155	pCi/g	-0.103	0.356	0.356	1.96	0.297 U	0.608 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Am-241	pCi/g	0.0721	0.173	0.174	1.96	0.143 U	0.297 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Eu-152	pCi/g	0.0734	0.128	0.128	1.96	0.0974 U	0.205 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Bi-214	pCi/g	0.374	0.128	0.134	1.96	0.0600	0.138	30
160-43157-10	SAMP	FSS-100-082021	Soil	Bi-212	pCi/g	0.270	0.822	0.822	1.96	0.6666 U	1.46 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Pb-214	pCi/g	0.402	0.102	0.110	1.96	0.0494	0.113	30
160-43157-10	SAMP	FSS-100-082021	Soil	Pb-212	pCi/g	0.460	0.0969	0.108	1.96	0.0477	0.105	30
160-43157-10	SAMP	FSS-100-082021	Soil	Eu-154	pCi/g	0.00892	0.075	0.075	1.96	0.0626 U	0.132 U	30
160-43157-10	SAMP	FSS-100-082021	Soil	Th-232	pCi/g	0.471	0.170	0.177	1.96	0.0719	0.181	30
160-43157-11	SAMP	FSS-101-082021	Soil	Cs-137	pCi/g	0.0042	0.042	0.042	1.96	0.0349 U	0.0767 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Co-60	pCi/g	0.0123	0.0426	0.0427	1.96	0.0205 U	0.0511 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	K-40	pCi/g	4.03	0.821	0.915	1.96	0.250	0.600	30
160-43157-11	SAMP	FSS-101-082021	Soil	Na-22	pCi/g	-0.00477	0.0343	0.0343	1.96	0.0280 U	0.0658 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Zn-65	pCi/g	0.00	0.0352	0.0352	1.96	0.0863 U	0.190 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Ra-226	pCi/g	0.268	0.105	0.108	1.96	0.0489	0.110	30
160-43157-11	SAMP	FSS-101-082021	Soil	Ac-228	pCi/g	0.350	0.214	0.217	1.96	0.0985	0.223	30
160-43157-11	SAMP	FSS-101-082021	Soil	Eu-155	pCi/g	0.0391	0.0638	0.0639	1.96	0.0499 U	0.109 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Am-241	pCi/g	0.0509	0.116	0.116	1.96	0.0956 U	0.199 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Eu-152	pCi/g	0.0641	0.131	0.131	1.96	0.0602	0.127 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Bi-214	pCi/g	0.268	0.105	0.108	1.96	0.0489	0.110	30
160-43157-11	SAMP	FSS-101-082021	Soil	Bi-212	pCi/g	0.00	0.440	0.440	1.96	0.346 U	0.776 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Pb-214	pCi/g	0.240	0.0843	0.0877	1.96	0.0476	0.105	30
160-43157-11	SAMP	FSS-101-082021	Soil	Pb-212	pCi/g	0.385	0.0718	0.0868	1.96	0.0335	0.0736	30
160-43157-11	SAMP	FSS-101-082021	Soil	Eu-154	pCi/g	0.0278	0.045	0.045	1.96	0.0432 U	0.0913 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Th-232	pCi/g	0.350	0.214	0.217	1.96	0.0985	0.223	30
160-43157-12	SAMP	FSS-102-082021	Soil	Cs-137	pCi/g	-0.0179	0.0697	0.0697	1.96	0.0587 U	0.127 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Co-60	pCi/g	0.0299	0.0239	0.0241	1.96	0.0116	0.0367 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	K-40	pCi/g	3.88	0.948	1.02	1.96	0.319	0.773	30
160-43157-12	SAMP	FSS-102-082021	Soil	Na-22	pCi/g	-0.024	0.0573	0.0574	1.96	0.0448 U	0.103 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Zn-65	pCi/g	-0.00477	0.121	0.121	1.96	0.112 U	0.248 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Ra-226	pCi/g	0.303	0.121	0.125	1.96	0.0524	0.121	30
160-43157-12	SAMP	FSS-102-082021	Soil	Ac-228	pCi/g	0.508	0.176	0.183	1.96	0.0645	0.164	30
160-43157-12	SAMP	FSS-102-082021	Soil	Eu-155	pCi/g	0.0265	0.0834	0.0835	1.96	0.160 U	0.333 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Am-241	pCi/g	0.0583	0.180	0.180	1.96	0.149 U	0.310 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Eu-152	pCi/g	-0.00165	0.00289	0.0029	1.96	0.0952 U	0.200 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Bi-214	pCi/g	0.303	0.121	0.125	1.96	0.0524	0.121	30
160-43157-12	SAMP	FSS-102-082021	Soil	Bi-212	pCi/g	0.469	0.814	0.816	1.96	0.645 U	1.40 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Pb-214	pCi/g	0.443	0.0915	0.102	1.96	0.0115	0.0363	30
160-43157-12	SAMP	FSS-102-082021	Soil	Pb-212	pCi/g	0.359	0.0831	0.0948	1.96	0.0407	0.0903	30
160-43157-12	SAMP	FSS-102-082021	Soil	Eu-154	pCi/g	0.0714	0.0884	0.0888	1.96	0.0601	0.127 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Th-232	pCi/g	0.508	0.176	0.183	1.96	0.0645	0.164	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Cs-137	pCi/g	0.02006	0.0445	0.0446	1.96	0.0345 U	0.0795 U	30

160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Co-60	pCi/g	0.00869	0.0535	0.0535	1.96	0.0306 U	0.0762 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	K-40	pCi/g	5.059	1.04	1.15	1.96	0.130	0.410	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Na-22	pCi/g	-0.02134	0.0644	0.0645	1.96	0.0512 U	0.117 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Zn-65	pCi/g	-0.0363	0.169	0.169	1.96	0.138 U	0.302 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Ra-226	pCi/g	0.325	0.139	0.142	1.96	0.0675	0.153	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Ac-228	pCi/g	0.6006	0.134	0.147	1.96	0.0334	0.106	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Eu-155	pCi/g	-0.009165	0.021	0.021	1.96	0.324 U	0.663 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Am-241	pCi/g	-0.07848	0.186	0.186	1.96	0.153 U	0.318 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Eu-152	pCi/g	0.01188	0.0208	0.0208	1.96	0.101 U	0.213 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Bi-214	pCi/g	0.325	0.139	0.142	1.96	0.0675	0.153	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Bi-212	pCi/g	-0.2185	0.959	0.959	1.96	0.789 U	1.70 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Pb-214	pCi/g	0.3262	0.124	0.128	1.96	0.0586	0.132	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Pb-212	pCi/g	0.4143	0.0987	0.107	1.96	0.0528	0.115	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Eu-154	pCi/g	0.05778	0.112	0.113	1.96	0.0737 U	0.155 U	30
160-43157-12 DU	QC_DUP	160-43157-12 DU	Soil	Th-232	pCi/g	0.6006	0.134	0.147	1.96	0.0334	0.106	30
160-43157-13	SAMP	FSS-103-082021	Soil	Cs-137	pCi/g	0.0251	0.045	0.045	1.96	0.0357 U	0.0776 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Co-60	pCi/g	0.0369	0.0218	0.0221	1.96	0.0078	0.0247	30
160-43157-13	SAMP	FSS-103-082021	Soil	K-40	pCi/g	3.69	0.692	0.784	1.96	0.0788	0.249	30
160-43157-13	SAMP	FSS-103-082021	Soil	Na-22	pCi/g	0.0231	0.0393	0.0393	1.96	0.0179	0.0447 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Zn-65	pCi/g	0.00	0.0159	0.0159	1.96	0.0804 U	0.176 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Ra-226	pCi/g	0.341	0.0933	0.0995	1.96	0.0355	0.0818	30
160-43157-13	SAMP	FSS-103-082021	Soil	Ac-228	pCi/g	0.386	0.114	0.120	1.96	0.0200	0.0631	30
160-43157-13	SAMP	FSS-103-082021	Soil	Eu-155	pCi/g	0.0622	0.166	0.166	1.96	0.138 U	0.284 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Am-241	pCi/g	-0.0594	0.121	0.121	1.96	0.0752 U	0.158 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Eu-152	pCi/g	0.145	0.0946	0.0958	1.96	0.134	0.280 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Bi-214	pCi/g	0.341	0.0933	0.0995	1.96	0.0355	0.0818	30
160-43157-13	SAMP	FSS-103-082021	Soil	Bi-212	pCi/g	0.156	0.429	0.430	1.96	0.344 U	0.763 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Pb-214	pCi/g	0.276	0.0689	0.0744	1.96	0.0354	0.0797	30
160-43157-13	SAMP	FSS-103-082021	Soil	Pb-212	pCi/g	0.471	0.0693	0.0914	1.96	0.0251	0.0560	30
160-43157-13	SAMP	FSS-103-082021	Soil	Eu-154	pCi/g	0.0313	0.0509	0.051	1.96	0.0372 U	0.0788 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Th-232	pCi/g	0.386	0.114	0.120	1.96	0.0200	0.0631	30
160-43157-14	SAMP	FSS-104-082021	Soil	Cs-137	pCi/g	0.067	0.0283	0.0291	1.96	0.0071	0.0225	30
160-43157-14	SAMP	FSS-104-082021	Soil	Co-60	pCi/g	0.00972	0.0331	0.0331	1.96	0.0239 U	0.0597 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	K-40	pCi/g	3.77	0.876	0.954	1.96	0.284	0.688	30
160-43157-14	SAMP	FSS-104-082021	Soil	Na-22	pCi/g	0.0157	0.0318	0.0318	1.96	0.0231 U	0.0577 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Zn-65	pCi/g	-0.107	0.0844	0.0851	1.96	0.147 U	0.315 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Ra-226	pCi/g	0.136	0.0900	0.0911	1.96	0.121	0.256 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Ac-228	pCi/g	0.510	0.208	0.214	1.96	0.0813	0.193	30
160-43157-14	SAMP	FSS-104-082021	Soil	Eu-155	pCi/g	-0.00433	0.120	0.120	1.96	0.153 U	0.317 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Am-241	pCi/g	0.0486	0.133	0.133	1.96	0.109 U	0.228 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Eu-152	pCi/g	0.0519	0.148	0.148	1.96	0.0785 U	0.165 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Bi-214	pCi/g	0.136	0.0900	0.0911	1.96	0.121	0.256 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Bi-212	pCi/g	0.264	0.443	0.444	1.96	0.335 U	0.770 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Pb-214	pCi/g	0.392	0.115	0.122	1.96	0.0613	0.135	30
160-43157-14	SAMP	FSS-104-082021	Soil	Pb-212	pCi/g	0.400	0.0801	0.0948	1.96	0.0366	0.0811	30
160-43157-14	SAMP	FSS-104-082021	Soil	Eu-154	pCi/g	-0.0381	0.0699	0.0700	1.96	0.0568 U	0.119 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Th-232	pCi/g	0.510	0.208	0.214	1.96	0.0813	0.193	30
160-43157-15	SAMP	FSS-105-082021	Soil	Cs-137	pCi/g	0.0188	0.0452	0.0453	1.96	0.0363 U	0.0795 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Co-60	pCi/g	0.00348	0.0186	0.0186	1.96	0.0088 U	0.0278 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	K-40	pCi/g	2.85	0.718	0.773	1.96	0.254	0.612	30
160-43157-15	SAMP	FSS-105-082021	Soil	Na-22	pCi/g	0.0219	0.0175	0.0176	1.96	0.0085	0.0269 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Zn-65	pCi/g	0.00	0.0440	0.0440	1.96	0.0942 U	0.206 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Ra-226	pCi/g	0.0928	0.0738	0.0744	1.96	0.142 U	0.296 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Ac-228	pCi/g	0.167	0.0689	0.0709	1.96	0.100	0.227 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Eu-155	pCi/g	-0.0792	0.136	0.136	1.96	0.184 U	0.378 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Am-241	pCi/g	0.0508	0.116	0.116	1.96	0.0955 U	0.199 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Eu-152	pCi/g	0.0590	0.132	0.132	1.96	0.0629 U	0.133 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Bi-214	pCi/g	0.0928	0.0738	0.0744	1.96	0.142 U	0.296 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Bi-212	pCi/g	0.0208	0.508	0.508	1.96	0.425 U	0.935 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Pb-214	pCi/g	0.415	0.0918	0.101	1.96	0.0337	0.0773	30
160-43157-15	SAMP	FSS-105-082021	Soil	Pb-212	pCi/g	0.314	0.0700	0.0805	1.96	0.0370	0.0807	30
160-43157-15	SAMP	FSS-105-082021	Soil	Eu-154	pCi/g	0.0557	0.0911	0.0913	1.96	0.0408	0.0866 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Th-232	pCi/g	0.167	0.0689	0.0709	1.96	0.100	0.227 U	30

160-43157-16	SAMP	FSS-106-082021	Soil	Cs-137	pCi/g	0.0266	0.0542	0.0543	1.96	0.0424 U	0.0952 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Co-60	pCi/g	0.0175	0.00952	0.00967	1.96	0.0425 U	0.0996 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	K-40	pCi/g	4.58	1.17	1.25	1.96	0.311	0.771	30
160-43157-16	SAMP	FSS-106-082021	Soil	Na-22	pCi/g	-0.0314	0.0649	0.065	1.96	0.0503 U	0.115 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Zn-65	pCi/g	0.00	0.0183	0.0183	1.96	0.143 U	0.311 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Ra-226	pCi/g	0.243	0.106	0.109	1.96	0.137	0.292 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Ac-228	pCi/g	0.526	0.134	0.144	1.96	0.0328	0.104	30
160-43157-16	SAMP	FSS-106-082021	Soil	Eu-155	pCi/g	-0.000994	0.00248	0.00248	1.96	0.2645 U	0.543 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Am-241	pCi/g	-0.0770	0.188	0.188	1.96	0.155 U	0.321 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Eu-152	pCi/g	0.123	0.0765	0.0775	1.96	0.0758	0.162 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Bi-214	pCi/g	0.243	0.106	0.109	1.96	0.137	0.292 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Bi-212	pCi/g	0.0306	0.592	0.592	1.96	0.494 U	1.11 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Pb-214	pCi/g	0.351	0.103	0.108	1.96	0.0582	0.131	30
160-43157-16	SAMP	FSS-106-082021	Soil	Pb-212	pCi/g	0.309	0.0821	0.0879	1.96	0.0415	0.0925	30
160-43157-16	SAMP	FSS-106-082021	Soil	Eu-154	pCi/g	0.061	0.0436	0.0440	1.96	0.0559	0.119 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Th-232	pCi/g	0.526	0.134	0.144	1.96	0.0328	0.104	30
160-43157-17	SAMP	FSS-107-082021	Soil	Cs-137	pCi/g	0.0191	0.0479	0.0479	1.96	0.0382 U	0.0848 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Co-60	pCi/g	0.00264	0.0259	0.0259	1.96	0.0260 U	0.0642 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	K-40	pCi/g	3.75	0.884	0.96	1.96	0.299	0.720	30
160-43157-17	SAMP	FSS-107-082021	Soil	Na-22	pCi/g	-0.0347	0.0551	0.0552	1.96	0.0416 U	0.095 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Zn-65	pCi/g	0.00	0.0214	0.0214	1.96	0.0844 U	0.190 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Ra-226	pCi/g	0.251	0.114	0.117	1.96	0.0490	0.113	30
160-43157-17	SAMP	FSS-107-082021	Soil	Ac-228	pCi/g	0.257	0.192	0.194	1.96	0.0882	0.208	30
160-43157-17	SAMP	FSS-107-082021	Soil	Eu-155	pCi/g	0.0013	0.00288	0.00288	1.96	0.127 U	0.265 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Am-241	pCi/g	0.0485	0.0668	0.0669	1.96	0.0464	0.102 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Eu-152	pCi/g	0.135	0.0749	0.0762	1.96	0.0717	0.152 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Bi-214	pCi/g	0.251	0.114	0.117	1.96	0.0490	0.113	30
160-43157-17	SAMP	FSS-107-082021	Soil	Bi-212	pCi/g	0.274	0.468	0.469	1.96	0.356 U	0.813 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Pb-214	pCi/g	0.282	0.0842	0.0889	1.96	0.0389	0.0898	30
160-43157-17	SAMP	FSS-107-082021	Soil	Pb-212	pCi/g	0.262	0.0721	0.0793	1.96	0.0390	0.0859	30
160-43157-17	SAMP	FSS-107-082021	Soil	Eu-154	pCi/g	0.0718	0.116	0.116	1.96	0.0468	0.0994 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Th-232	pCi/g	0.257	0.192	0.194	1.96	0.0882	0.208	30
160-43157-18	SAMP	FSS-108-082021	Soil	Cs-137	pCi/g	-0.000908	0.0424	0.0424	1.96	0.0355 U	0.0784 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Co-60	pCi/g	0.0126	0.0257	0.0257	1.96	0.0222 U	0.0552 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	K-40	pCi/g	3.30	0.790	0.856	1.96	0.270	0.649	30
160-43157-18	SAMP	FSS-108-082021	Soil	Na-22	pCi/g	-0.00901	0.0379	0.0379	1.96	0.0303 U	0.0711 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Zn-65	pCi/g	-0.101	0.158	0.158	1.96	0.125 U	0.269 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Ra-226	pCi/g	0.204	0.0772	0.0800	1.96	0.0391	0.0910	30
160-43157-18	SAMP	FSS-108-082021	Soil	Ac-228	pCi/g	0.186	0.183	0.184	1.96	0.0922	0.212 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Eu-155	pCi/g	-0.000927	0.0909	0.0909	1.96	0.190 U	0.391 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Am-241	pCi/g	-0.0638	0.0772	0.0775	1.96	0.117 U	0.242 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Eu-152	pCi/g	-0.00384	0.00531	0.00532	1.96	0.0746 U	0.157 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Bi-214	pCi/g	0.204	0.0772	0.0800	1.96	0.0391	0.0910	30
160-43157-18	SAMP	FSS-108-082021	Soil	Bi-212	pCi/g	0.011	0.532	0.532	1.96	0.446 U	0.982 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Pb-214	pCi/g	0.299	0.0853	0.0906	1.96	0.0385	0.0875	30
160-43157-18	SAMP	FSS-108-082021	Soil	Pb-212	pCi/g	0.290	0.0642	0.0739	1.96	0.0294	0.0659	30
160-43157-18	SAMP	FSS-108-082021	Soil	Eu-154	pCi/g	0.048	0.0786	0.0787	1.96	0.0511 U	0.107 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Th-232	pCi/g	0.186	0.183	0.184	1.96	0.0922	0.212 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Cs-137	pCi/g	0.0174	0.0351	0.0351	1.96	0.0267 U	0.0624 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Co-60	pCi/g	0.0208	0.0560	0.0561	1.96	0.0266 U	0.0662 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	K-40	pCi/g	3.38	0.793	0.861	1.96	0.113	0.356	30
160-43157-19	SAMP	FSS-109-082021	Soil	Na-22	pCi/g	0.0232	0.0203	0.0205	1.96	0.0108	0.0342 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Zn-65	pCi/g	0.00	0.0398	0.0398	1.96	0.125 U	0.273 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Ra-226	pCi/g	0.340	0.104	0.109	1.96	0.0431	0.102	30
160-43157-19	SAMP	FSS-109-082021	Soil	Ac-228	pCi/g	0.373	0.161	0.165	1.96	0.145	0.324	30
160-43157-19	SAMP	FSS-109-082021	Soil	Eu-155	pCi/g	0.00	0.0693	0.0693	1.96	0.247 U	0.506 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Am-241	pCi/g	-0.00846	0.162	0.162	1.96	0.136 U	0.282 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Eu-152	pCi/g	0.0872	0.163	0.163	1.96	0.0842	0.178 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Bi-214	pCi/g	0.340	0.104	0.109	1.96	0.0431	0.102	30
160-43157-19	SAMP	FSS-109-082021	Soil	Bi-212	pCi/g	0.00	0.113	0.113	1.96	0.147 U	0.404 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Pb-214	pCi/g	0.345	0.102	0.107	1.96	0.0459	0.105	30
160-43157-19	SAMP	FSS-109-082021	Soil	Pb-212	pCi/g	0.304	0.0805	0.0863	1.96	0.0441	0.0966	30
160-43157-19	SAMP	FSS-109-082021	Soil	Eu-154	pCi/g	0.140	0.0587	0.0603	1.96	0.0661	0.139	30

160-43157-19	SAMP	FSS-109-082021	Soil	Th-232	pCi/g	0.373	0.161	0.165	1.96	0.145	0.324	30
160-43157-2	SAMP	FSS-095-081921	Soil	Cs-137	pCi/g	-0.0439	0.0708	0.071	1.96	0.0556 U	0.122 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Co-60	pCi/g	-0.0342	0.0877	0.0878	1.96	0.0424 U	0.0994 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	K-40	pCi/g	4.52	1.16	1.24	1.96	0.311	0.769	30
160-43157-2	SAMP	FSS-095-081921	Soil	Na-22	pCi/g	-0.00174	0.0491	0.0491	1.96	0.0410 U	0.0961 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Zn-65	pCi/g	0.00	0.0183	0.0183	1.96	0.151 U	0.327 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Ra-226	pCi/g	0.404	0.124	0.131	1.96	0.0485	0.115	30
160-43157-2	SAMP	FSS-095-081921	Soil	Ac-228	pCi/g	0.478	0.199	0.205	1.96	0.164	0.365	30
160-43157-2	SAMP	FSS-095-081921	Soil	Eu-155	pCi/g	0.0937	0.323	0.323	1.96	0.269 U	0.552 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Am-241	pCi/g	-0.0697	0.179	0.179	1.96	0.148 U	0.306 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Eu-152	pCi/g	0.00000803	0.000015	0.000015	1.96	0.0990 U	0.209 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Bi-214	pCi/g	0.404	0.124	0.131	1.96	0.0485	0.115	30
160-43157-2	SAMP	FSS-095-081921	Soil	Bi-212	pCi/g	0.246	0.442	0.443	1.96	0.328 U	0.780 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Pb-214	pCi/g	0.358	0.106	0.112	1.96	0.0581	0.131	30
160-43157-2	SAMP	FSS-095-081921	Soil	Pb-212	pCi/g	0.380	0.0876	0.0958	1.96	0.0415	0.0924	30
160-43157-2	SAMP	FSS-095-081921	Soil	Eu-154	pCi/g	0.0925	0.128	0.128	1.96	0.0680	0.143 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Th-232	pCi/g	0.478	0.199	0.205	1.96	0.164	0.365	30
160-43157-20	SAMP	FSS-110-082021	Soil	Cs-137	pCi/g	0.00	0.014	0.0140	1.96	0.0184 U	0.043 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Co-60	pCi/g	-0.00443	0.0519	0.0520	1.96	0.0261 U	0.0611 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	K-40	pCi/g	3.22	0.644	0.720	1.96	0.0781	0.247	30
160-43157-20	SAMP	FSS-110-082021	Soil	Na-22	pCi/g	-0.0139	0.0327	0.0327	1.96	0.0252 U	0.059 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Zn-65	pCi/g	0.00	0.0524	0.0524	1.96	0.0797 U	0.175 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Ra-226	pCi/g	0.247	0.0817	0.0855	1.96	0.0358	0.0822	30
160-43157-20	SAMP	FSS-110-082021	Soil	Ac-228	pCi/g	0.351	0.136	0.141	1.96	0.0766	0.176	30
160-43157-20	SAMP	FSS-110-082021	Soil	Eu-155	pCi/g	0.00	0.0307	0.0307	1.96	0.201 U	0.410 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Am-241	pCi/g	-0.0196	0.102	0.102	1.96	0.0643 U	0.136 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Eu-152	pCi/g	0.0537	0.0378	0.0383	1.96	0.0605 U	0.127 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Bi-214	pCi/g	0.247	0.0817	0.0855	1.96	0.0358	0.0822	30
160-43157-20	SAMP	FSS-110-082021	Soil	Bi-212	pCi/g	0.268	0.451	0.452	1.96	0.352 U	0.778 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Pb-214	pCi/g	0.256	0.0598	0.0653	1.96	0.0329	0.0746	30
160-43157-20	SAMP	FSS-110-082021	Soil	Pb-212	pCi/g	0.319	0.0592	0.0717	1.96	0.0250	0.0557	30
160-43157-20	SAMP	FSS-110-082021	Soil	Eu-154	pCi/g	0.0567	0.0746	0.0749	1.96	0.0347	0.0738 U	30
160-43157-20	SAMP	FSS-110-082021	Soil	Th-232	pCi/g	0.351	0.136	0.141	1.96	0.0766	0.176	30
160-43157-21	SAMP	FSS-111-082021	Soil	Cs-137	pCi/g	0.0166	0.0420	0.0420	1.96	0.0333 U	0.0748 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Co-60	pCi/g	0.0383	0.0198	0.0201	1.96	0.0102	0.0322	30
160-43157-21	SAMP	FSS-111-082021	Soil	K-40	pCi/g	2.60	0.908	0.945	1.96	0.385	0.889	30
160-43157-21	SAMP	FSS-111-082021	Soil	Na-22	pCi/g	0.00564	0.0295	0.0295	1.96	0.0234 U	0.0583 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Zn-65	pCi/g	0.00	0.0295	0.0295	1.96	0.0860 U	0.192 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Ra-226	pCi/g	0.301	0.0979	0.103	1.96	0.0380	0.0901	30
160-43157-21	SAMP	FSS-111-082021	Soil	Ac-228	pCi/g	0.109	0.0670	0.0679	1.96	0.157 U	0.344 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Eu-155	pCi/g	0.00	0.0841	0.0841	1.96	0.132 U	0.274 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Am-241	pCi/g	0.00225	0.108	0.108	1.96	0.0719 U	0.153 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Eu-152	pCi/g	0.135	0.0764	0.0776	1.96	0.0577	0.123	30
160-43157-21	SAMP	FSS-111-082021	Soil	Bi-214	pCi/g	0.301	0.0979	0.103	1.96	0.0380	0.0901	30
160-43157-21	SAMP	FSS-111-082021	Soil	Bi-212	pCi/g	0.876	0.350	0.361	1.96	0.0850	0.269	30
160-43157-21	SAMP	FSS-111-082021	Soil	Pb-214	pCi/g	0.268	0.0785	0.0832	1.96	0.0417	0.0952	30
160-43157-21	SAMP	FSS-111-082021	Soil	Pb-212	pCi/g	0.342	0.075	0.0866	1.96	0.0354	0.0786	30
160-43157-21	SAMP	FSS-111-082021	Soil	Eu-154	pCi/g	0.0552	0.0937	0.0939	1.96	0.0435	0.0927 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Th-232	pCi/g	0.109	0.067	0.0679	1.96	0.157 U	0.344 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Cs-137	pCi/g	0.0157	0.0384	0.0384	1.96	0.0306 U	0.0677 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Co-60	pCi/g	0.0150	0.0403	0.0403	1.96	0.0192 U	0.0477 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	K-40	pCi/g	4.00	0.786	0.883	1.96	0.233	0.560	30
160-43157-22	SAMP	FSS-112-082021	Soil	Na-22	pCi/g	0.00222	0.0316	0.0316	1.96	0.0261 U	0.0613 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Zn-65	pCi/g	0.00	0.0116	0.0116	1.96	0.0850 U	0.186 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Ra-226	pCi/g	0.382	0.100	0.107	1.96	0.0409	0.0928	30
160-43157-22	SAMP	FSS-112-082021	Soil	Ac-228	pCi/g	0.311	0.112	0.117	1.96	0.0795	0.183	30
160-43157-22	SAMP	FSS-112-082021	Soil	Eu-155	pCi/g	-0.0008	0.0801	0.0801	1.96	0.166 U	0.341 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Am-241	pCi/g	-0.0584	0.0681	0.0683	1.96	0.0973 U	0.202 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Eu-152	pCi/g	0.0992	0.133	0.133	1.96	0.0498	0.106 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Bi-214	pCi/g	0.382	0.100	0.107	1.96	0.0409	0.0928	30
160-43157-22	SAMP	FSS-112-082021	Soil	Bi-212	pCi/g	0.159	0.284	0.285	1.96	0.212 U	0.500 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Pb-214	pCi/g	0.404	0.0756	0.0861	1.96	0.0337	0.0765	30
160-43157-22	SAMP	FSS-112-082021	Soil	Pb-212	pCi/g	0.370	0.0667	0.0816	1.96	0.0299	0.0659	30

160-43157-22	SAMP	FSS-112-082021	Soil	Eu-154	pCi/g	-0.00956	0.0176	0.0177	1.96	0.0450 U	0.0945 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Th-232	pCi/g	0.311	0.112	0.117	1.96	0.0795	0.183	30
160-43157-23	SAMP	FSS-113-082021	Soil	Cs-137	pCi/g	-0.0349	0.0758	0.0759	1.96	0.0611 U	0.131 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Co-60	pCi/g	-0.0610	0.111	0.111	1.96	0.0534 U	0.120 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	K-40	pCi/g	4.51	0.917	1.02	1.96	0.113	0.357	30
160-43157-23	SAMP	FSS-113-082021	Soil	Na-22	pCi/g	-0.00621	0.0447	0.0447	1.96	0.0365 U	0.0856 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Zn-65	pCi/g	-0.0432	0.154	0.154	1.96	0.126 U	0.274 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Ra-226	pCi/g	0.0799	0.157	0.157	1.96	0.170 U	0.355 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Ac-228	pCi/g	0.468	0.145	0.152	1.96	0.0291	0.0922	30
160-43157-23	SAMP	FSS-113-082021	Soil	Eu-155	pCi/g	-0.0878	0.326	0.326	1.96	0.272 U	0.557 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Am-241	pCi/g	-0.0373	0.155	0.155	1.96	0.129 U	0.268 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Eu-152	pCi/g	0.0919	0.163	0.164	1.96	0.0964 U	0.202 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Bi-214	pCi/g	0.0799	0.157	0.157	1.96	0.170 U	0.355 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Bi-212	pCi/g	0.220	0.570	0.570	1.96	0.453 U	1.02 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Pb-214	pCi/g	0.294	0.122	0.126	1.96	0.0611	0.135	30
160-43157-23	SAMP	FSS-113-082021	Soil	Pb-212	pCi/g	0.406	0.0868	0.0962	1.96	0.0427	0.0938	30
160-43157-23	SAMP	FSS-113-082021	Soil	Eu-154	pCi/g	-0.0392	0.0887	0.0888	1.96	0.0729 U	0.152 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Th-232	pCi/g	0.468	0.145	0.152	1.96	0.0291	0.0922	30
160-43157-24	SAMP	FSS-114-082021	Soil	Cs-137	pCi/g	-0.0210	0.112	0.112	1.96	0.0544 U	0.117 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Co-60	pCi/g	0.00600	0.0281	0.0281	1.96	0.0103 U	0.0325 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	K-40	pCi/g	2.55	0.745	0.787	1.96	0.282	0.685	30
160-43157-24	SAMP	FSS-114-082021	Soil	Na-22	pCi/g	-0.00284	0.0392	0.0392	1.96	0.0324 U	0.0764 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Zn-65	pCi/g	-0.106	0.0867	0.0873	1.96	0.134 U	0.288 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Ra-226	pCi/g	0.085	0.109	0.109	1.96	0.162 U	0.338 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Ac-228	pCi/g	0.318	0.212	0.215	1.96	0.0990	0.229	30
160-43157-24	SAMP	FSS-114-082021	Soil	Eu-155	pCi/g	-0.00431	0.134	0.134	1.96	0.175 U	0.361 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Am-241	pCi/g	0.0540	0.135	0.135	1.96	0.111 U	0.232 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Eu-152	pCi/g	0.0447	0.0878	0.0879	1.96	0.0713 U	0.151 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Bi-214	pCi/g	0.085	0.109	0.109	1.96	0.162 U	0.338 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Bi-212	pCi/g	-0.252	0.614	0.615	1.96	0.492 U	1.08 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Pb-214	pCi/g	0.272	0.0784	0.0831	1.96	0.0242	0.0602	30
160-43157-24	SAMP	FSS-114-082021	Soil	Pb-212	pCi/g	0.349	0.0790	0.0906	1.96	0.0405	0.0888	30
160-43157-24	SAMP	FSS-114-082021	Soil	Eu-154	pCi/g	-0.0358	0.0707	0.0707	1.96	0.0576 U	0.121 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Th-232	pCi/g	0.318	0.212	0.215	1.96	0.0990	0.229	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Cs-137	pCi/g	0.0170	0.041	0.0410	1.96	0.0328 U	0.072 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Co-60	pCi/g	0.0170	0.0149	0.0150	1.96	0.0079	0.0251 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	K-40	pCi/g	3.95	0.721	0.823	1.96	0.0799	0.253	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Na-22	pCi/g	0.0197	0.0158	0.0159	1.96	0.0077	0.0242 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Zn-65	pCi/g	-0.0137	0.113	0.113	1.96	0.0936 U	0.203 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Ra-226	pCi/g	0.226	0.0775	0.0808	1.96	0.0352	0.0814	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Ac-228	pCi/g	0.391	0.114	0.121	1.96	0.0203	0.0641	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Eu-155	pCi/g	-0.00609	0.0147	0.0147	1.96	0.169 U	0.347 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Am-241	pCi/g	0.0137	0.109	0.109	1.96	0.0909 U	0.189 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Eu-152	pCi/g	0.0836	0.122	0.122	1.96	0.0563	0.119 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Bi-214	pCi/g	0.226	0.0775	0.0808	1.96	0.0352	0.0814	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Bi-212	pCi/g	-0.192	0.643	0.643	1.96	0.527 U	1.13 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Pb-214	pCi/g	0.187	0.0608	0.0637	1.96	0.0396	0.0883	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Pb-212	pCi/g	0.363	0.0642	0.079	1.96	0.0274	0.0607	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Eu-154	pCi/g	-0.0356	0.0583	0.0584	1.96	0.0473 U	0.0992 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Th-232	pCi/g	0.391	0.114	0.121	1.96	0.0203	0.0641	30
160-43157-3	SAMP	FSS-096-081921	Soil	Cs-137	pCi/g	0.018	0.0335	0.0335	1.96	0.0259 U	0.0585 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Co-60	pCi/g	-0.0012	0.0557	0.0557	1.96	0.0282 U	0.0661 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	K-40	pCi/g	4.64	0.804	0.929	1.96	0.0844	0.267	30
160-43157-3	SAMP	FSS-096-081921	Soil	Na-22	pCi/g	0.00231	0.0328	0.0328	1.96	0.0272 U	0.0638 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Zn-65	pCi/g	-0.0815	0.138	0.138	1.96	0.110 U	0.236 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Ra-226	pCi/g	0.231	0.0994	0.102	1.96	0.0439	0.0993	30
160-43157-3	SAMP	FSS-096-081921	Soil	Ac-228	pCi/g	0.487	0.158	0.165	1.96	0.0478	0.121	30
160-43157-3	SAMP	FSS-096-081921	Soil	Eu-155	pCi/g	0.0516	0.111	0.111	1.96	0.136 U	0.281 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Am-241	pCi/g	0.0145	0.111	0.111	1.96	0.0927 U	0.193 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Eu-152	pCi/g	0.0871	0.127	0.128	1.96	0.0611	0.129 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Bi-214	pCi/g	0.231	0.0994	0.102	1.96	0.0439	0.0993	30
160-43157-3	SAMP	FSS-096-081921	Soil	Bi-212	pCi/g	0.290	0.463	0.464	1.96	0.358 U	0.797 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Pb-214	pCi/g	0.348	0.0854	0.0924	1.96	0.032	0.0734	30

160-43157-3	SAMP	FSS-096-081921	Soil	Pb-212	pCi/g	0.378	0.0656	0.0813	1.96	0.0258	0.0578	30
160-43157-3	SAMP	FSS-096-081921	Soil	Eu-154	pCi/g	0.0381	0.0704	0.0705	1.96	0.0416 U	0.0880 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Th-232	pCi/g	0.487	0.158	0.165	1.96	0.0478	0.121	30
160-43157-4	SAMP	FSS-097-081921	Soil	Cs-137	pCi/g	0.0224	0.0415	0.0415	1.96	0.0327 U	0.0719 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Co-60	pCi/g	0.00592	0.0557	0.0557	1.96	0.0278 U	0.0653 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	K-40	pCi/g	9.99	1.21	1.57	1.96	0.239	0.575	30
160-43157-4	SAMP	FSS-097-081921	Soil	Na-22	pCi/g	0.0239	0.0287	0.0288	1.96	0.0190	0.0473 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Zn-65	pCi/g	-0.0803	0.140	0.140	1.96	0.112 U	0.241 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Ra-226	pCi/g	0.467	0.119	0.128	1.96	0.0456	0.103	30
160-43157-4	SAMP	FSS-097-081921	Soil	Ac-228	pCi/g	0.554	0.124	0.136	1.96	0.0211	0.0668	30
160-43157-4	SAMP	FSS-097-081921	Soil	Eu-155	pCi/g	-0.0745	0.139	0.139	1.96	0.210 U	0.428 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Am-241	pCi/g	0.0358	0.118	0.119	1.96	0.0981 U	0.204 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Eu-152	pCi/g	0.109	0.175	0.175	1.96	0.0591	0.125 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Bi-214	pCi/g	0.467	0.119	0.128	1.96	0.0456	0.103	30
160-43157-4	SAMP	FSS-097-081921	Soil	Bi-212	pCi/g	0.461	0.798	0.799	1.96	0.643 U	1.36 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Pb-214	pCi/g	0.562	0.0898	0.106	1.96	0.0411	0.0915	30
160-43157-4	SAMP	FSS-097-081921	Soil	Pb-212	pCi/g	0.432	0.0749	0.0928	1.96	0.0355	0.0773	30
160-43157-4	SAMP	FSS-097-081921	Soil	Eu-154	pCi/g	0.0471	0.0795	0.0796	1.96	0.0435	0.0916 U	30
160-43157-4	SAMP	FSS-097-081921	Soil	Th-232	pCi/g	0.554	0.124	0.136	1.96	0.0211	0.0668	30
160-43157-5	SAMP	FSS-297-081921	Soil	Cs-137	pCi/g	0.147	0.0651	0.0668	1.96	0.0281	0.0654	30
160-43157-5	SAMP	FSS-297-081921	Soil	Co-60	pCi/g	0.0416	0.0300	0.0302	1.96	0.0115	0.0363	30
160-43157-5	SAMP	FSS-297-081921	Soil	K-40	pCi/g	4.36	0.993	1.09	1.96	0.328	0.790	30
160-43157-5	SAMP	FSS-297-081921	Soil	Na-22	pCi/g	-0.019	0.0575	0.0575	1.96	0.0457 U	0.104 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Zn-65	pCi/g	0.00	0.0525	0.0525	1.96	0.163 U	0.349 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Ra-226	pCi/g	0.513	0.130	0.140	1.96	0.0456	0.107	30
160-43157-5	SAMP	FSS-297-081921	Soil	Ac-228	pCi/g	0.485	0.164	0.171	1.96	0.0967	0.228	30
160-43157-5	SAMP	FSS-297-081921	Soil	Eu-155	pCi/g	0.0334	0.102	0.102	1.96	0.178 U	0.368 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Am-241	pCi/g	0.0572	0.129	0.129	1.96	0.0841 U	0.178 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Eu-152	pCi/g	0.0849	0.137	0.137	1.96	0.0730	0.155 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Bi-214	pCi/g	0.513	0.130	0.140	1.96	0.0456	0.107	30
160-43157-5	SAMP	FSS-297-081921	Soil	Bi-212	pCi/g	-0.287	0.750	0.751	1.96	0.6048 U	1.32 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Pb-214	pCi/g	0.382	0.117	0.123	1.96	0.0685	0.150	30
160-43157-5	SAMP	FSS-297-081921	Soil	Pb-212	pCi/g	0.465	0.0958	0.112	1.96	0.0483	0.105	30
160-43157-5	SAMP	FSS-297-081921	Soil	Eu-154	pCi/g	0.0514	0.0857	0.0859	1.96	0.0589 U	0.124 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Th-232	pCi/g	0.485	0.164	0.171	1.96	0.0967	0.228	30
160-43157-6	SAMP	FSS-098-082021	Soil	Cs-137	pCi/g	0.118	0.0333	0.0354	1.96	0.0057	0.0181	30
160-43157-6	SAMP	FSS-098-082021	Soil	Co-60	pCi/g	-0.00466	0.0165	0.0165	1.96	0.0346 U	0.0789 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	K-40	pCi/g	3.92	0.739	0.837	1.96	0.0846	0.268	30
160-43157-6	SAMP	FSS-098-082021	Soil	Na-22	pCi/g	-0.0658	0.0675	0.0678	1.96	0.0510 U	0.111 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Zn-65	pCi/g	0.00	0.0453	0.0453	1.96	0.0932 U	0.203 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Ra-226	pCi/g	0.0658	0.107	0.107	1.96	0.101 U	0.214 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Ac-228	pCi/g	0.436	0.110	0.118	1.96	0.0678	0.160	30
160-43157-6	SAMP	FSS-098-082021	Soil	Eu-155	pCi/g	-0.0052	0.0114	0.0114	1.96	0.189 U	0.387 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Am-241	pCi/g	0.0568	0.124	0.125	1.96	0.102 U	0.213 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Eu-152	pCi/g	0.0224	0.0935	0.0935	1.96	0.0724 U	0.152 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Bi-214	pCi/g	0.0658	0.107	0.107	1.96	0.101 U	0.214 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Bi-212	pCi/g	-0.0396	0.740	0.740	1.96	0.619 U	1.32 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Pb-214	pCi/g	0.342	0.0784	0.0858	1.96	0.0480	0.105	30
160-43157-6	SAMP	FSS-098-082021	Soil	Pb-212	pCi/g	0.434	0.0707	0.0895	1.96	0.0282	0.0627	30
160-43157-6	SAMP	FSS-098-082021	Soil	Eu-154	pCi/g	0.0561	0.068	0.0682	1.96	0.0387	0.0822 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Th-232	pCi/g	0.436	0.110	0.118	1.96	0.0678	0.160	30
160-43157-7	SAMP	FSS-298-082021	Soil	Cs-137	pCi/g	0.0345	0.0602	0.0603	1.96	0.0322	0.0709 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Co-60	pCi/g	-0.0479	0.0808	0.081	1.96	0.0389 U	0.0873 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	K-40	pCi/g	3.96	0.734	0.835	1.96	0.0824	0.261	30
160-43157-7	SAMP	FSS-298-082021	Soil	Na-22	pCi/g	-0.0214	0.0425	0.0425	1.96	0.0328 U	0.0749 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Zn-65	pCi/g	0.00	0.0167	0.0167	1.96	0.0715 U	0.159 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Ra-226	pCi/g	0.276	0.096	0.100	1.96	0.0428	0.0969	30
160-43157-7	SAMP	FSS-298-082021	Soil	Ac-228	pCi/g	0.511	0.0939	0.107	1.96	0.0209	0.0661	30
160-43157-7	SAMP	FSS-298-082021	Soil	Eu-155	pCi/g	0.00	0.0639	0.0639	1.96	0.219 U	0.446 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Am-241	pCi/g	0.0681	0.103	0.103	1.96	0.0836 U	0.175 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Eu-152	pCi/g	0.154	0.0633	0.0652	1.96	0.147	0.308 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Bi-214	pCi/g	0.276	0.096	0.100	1.96	0.0428	0.0969	30
160-43157-7	SAMP	FSS-298-082021	Soil	Bi-212	pCi/g	0.00	0.409	0.409	1.96	0.437 U	0.953 U	30

160-43157-7	SAMP	FSS-298-082021	Soil	Pb-214	pCi/g	0.335	0.0697	0.0776	1.96	0.0382	0.0857	30
160-43157-7	SAMP	FSS-298-082021	Soil	Pb-212	pCi/g	0.383	0.0682	0.0837	1.96	0.0305	0.0671	30
160-43157-7	SAMP	FSS-298-082021	Soil	Eu-154	pCi/g	0.0484	0.0760	0.0762	1.96	0.0420	0.0885 U	30
160-43157-7	SAMP	FSS-298-082021	Soil	Th-232	pCi/g	0.511	0.0939	0.107	1.96	0.0209	0.0661	30
160-43157-8	SAMP	FSS-099-082021	Soil	Cs-137	pCi/g	0.146	0.0437	0.0461	1.96	0.0079	0.025	30
160-43157-8	SAMP	FSS-099-082021	Soil	Co-60	pCi/g	-0.029	0.0377	0.0378	1.96	0.0617 U	0.137 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	K-40	pCi/g	8.19	1.31	1.55	1.96	0.328	0.791	30
160-43157-8	SAMP	FSS-099-082021	Soil	Na-22	pCi/g	0.0413	0.0523	0.0524	1.96	0.0374	0.0876 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Zn-65	pCi/g	0.00	0.0166	0.0166	1.96	0.0989 U	0.221 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Ra-226	pCi/g	0.466	0.125	0.134	1.96	0.0439	0.104	30
160-43157-8	SAMP	FSS-099-082021	Soil	Ac-228	pCi/g	0.472	0.232	0.237	1.96	0.0969	0.228	30
160-43157-8	SAMP	FSS-099-082021	Soil	Eu-155	pCi/g	0.00	0.094	0.094	1.96	0.157 U	0.326 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Am-241	pCi/g	-0.00127	0.148	0.148	1.96	0.0986 U	0.207 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Eu-152	pCi/g	0.0924	0.148	0.148	1.96	0.0839	0.177 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Bi-214	pCi/g	0.466	0.125	0.134	1.96	0.0439	0.104	30
160-43157-8	SAMP	FSS-099-082021	Soil	Bi-212	pCi/g	0.00	0.522	0.522	1.96	0.583 U	1.28 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Pb-214	pCi/g	0.413	0.0937	0.103	1.96	0.0419	0.0971	30
160-43157-8	SAMP	FSS-099-082021	Soil	Pb-212	pCi/g	0.492	0.0973	0.116	1.96	0.0479	0.105	30
160-43157-8	SAMP	FSS-099-082021	Soil	Eu-154	pCi/g	0.0162	0.0234	0.0234	1.96	0.0645 U	0.135 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Th-232	pCi/g	0.472	0.232	0.237	1.96	0.0969	0.228	30
160-43157-9	SAMP	FSS-299-082021	Soil	Cs-137	pCi/g	0.124	0.0470	0.0487	1.96	0.0142	0.0376	30
160-43157-9	SAMP	FSS-299-082021	Soil	Co-60	pCi/g	-0.0245	0.0899	0.0900	1.96	0.0457 U	0.105 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	K-40	pCi/g	4.27	0.978	1.07	1.96	0.314	0.761	30
160-43157-9	SAMP	FSS-299-082021	Soil	Na-22	pCi/g	0.00158	0.0432	0.0432	1.96	0.0360 U	0.0849 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Zn-65	pCi/g	-0.0047	0.105	0.105	1.96	0.140 U	0.303 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Ra-226	pCi/g	0.434	0.126	0.134	1.96	0.0434	0.103	30
160-43157-9	SAMP	FSS-299-082021	Soil	Ac-228	pCi/g	0.647	0.162	0.174	1.96	0.0495	0.133	30
160-43157-9	SAMP	FSS-299-082021	Soil	Eu-155	pCi/g	0.0288	0.0907	0.0908	1.96	0.178 U	0.369 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Am-241	pCi/g	-0.074	0.202	0.202	1.96	0.167 U	0.345 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Eu-152	pCi/g	0.0938	0.123	0.124	1.96	0.0792	0.168 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Bi-214	pCi/g	0.434	0.126	0.134	1.96	0.0434	0.103	30
160-43157-9	SAMP	FSS-299-082021	Soil	Bi-212	pCi/g	0.292	0.525	0.525	1.96	0.4026 U	0.916 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Pb-214	pCi/g	0.491	0.112	0.122	1.96	0.0313	0.0757	30
160-43157-9	SAMP	FSS-299-082021	Soil	Pb-212	pCi/g	0.506	0.0953	0.115	1.96	0.0443	0.0973	30
160-43157-9	SAMP	FSS-299-082021	Soil	Eu-154	pCi/g	0.057	0.105	0.105	1.96	0.0589 U	0.124 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Th-232	pCi/g	0.647	0.162	0.174	1.96	0.0495	0.133	30
LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Cs-137	pCi/g	26.96	0.641	2.82	1.96	0.107	0.224	30
LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Co-60	pCi/g	8.926	0.296	0.927	1.96	0.0318	0.0771	30
LCS 160-524257/2-A	QC_LCS	LCS 160-524257/2-A	Soil	Am-241	pCi/g	102.4	1.58	10.5	1.96	0.579	1.17	30
LCS 160-524480/2-A	QC_LCS	LCS 160-524480/2-A	Soil	Cs-137	pCi/g	25.34	0.546	2.64	1.96	0.0841	0.175	30
LCS 160-524480/2-A	QC_LCS	LCS 160-524480/2-A	Soil	Co-60	pCi/g	8.207	0.254	0.847	1.96	0.0318	0.0744	30
LCS 160-524480/2-A	QC_LCS	LCS 160-524480/2-A	Soil	Am-241	pCi/g	96.41	1.50	9.92	1.96	0.539	1.09	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Cs-137	pCi/g	0.02007	0.0439	0.044	1.96	0.0335 U	0.0785 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Co-60	pCi/g	-0.04662	0.0944	0.0946	1.96	0.0463 U	0.109 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	K-40	pCi/g	-0.08877	0.453	0.453	1.96	0.389 U	0.945 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Na-22	pCi/g	0.003918	0.0388	0.0388	1.96	0.0316 U	0.0792 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Zn-65	pCi/g	-0.005834	0.0676	0.0676	1.96	0.0755 U	0.179 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Ra-226	pCi/g	0.02344	0.0352	0.0353	1.96	0.152 U	0.324 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Ac-228	pCi/g	0.01134	0.036	0.036	1.96	0.111 U	0.265 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-155	pCi/g	-0.06081	0.170	0.170	1.96	0.138 U	0.292 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Am-241	pCi/g	-0.05574	0.140	0.141	1.96	0.115 U	0.243 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-152	pCi/g	0.09335	0.061	0.0617	1.96	0.0688	0.149 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Bi-214	pCi/g	0.02344	0.0352	0.0353	1.96	0.152 U	0.324 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Bi-212	pCi/g	0.1406	0.810	0.811	1.96	0.6669 U	1.47 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Pb-214	pCi/g	0.006017	0.107	0.107	1.96	0.0898 U	0.196 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Pb-212	pCi/g	0.001236	0.0978	0.0978	1.96	0.0817 U	0.174 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Eu-154	pCi/g	0.01668	0.0319	0.032	1.96	0.0583 U	0.125 U	30
MB 160-524257/1-A	QC_BLK	MB 160-524257/1-A	Soil	Th-232	pCi/g	0.01134	0.036	0.036	1.96	0.111 U	0.265 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Cs-137	pCi/g	0.003196	0.0384	0.0384	1.96	0.0319 U	0.0724 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Co-60	pCi/g	0.01562	0.0116	0.0117	1.96	0.0260 U	0.0647 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	K-40	pCi/g	0.1893	0.579	0.580	1.96	0.2701 U	0.668 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Na-22	pCi/g	-0.003019	0.0307	0.0308	1.96	0.0251 U	0.0625 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Zn-65	pCi/g	0.00	0.0386	0.0386	1.96	0.0750 U	0.172 U	30

MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Ra-226	pCi/g	0.04635	0.0371	0.0374	1.96	0.0939 U	0.203 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Ac-228	pCi/g	0.05571	0.109	0.110	1.96	0.0625 U	0.157 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Eu-155	pCi/g	0.01989	0.0654	0.0655	1.96	0.129 U	0.270 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Am-241	pCi/g	0.03314	0.0743	0.0744	1.96	0.0597 U	0.130 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Eu-152	pCi/g	0.01595	0.0226	0.0227	1.96	0.0618 U	0.132 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Bi-214	pCi/g	0.04635	0.0371	0.0374	1.96	0.0939 U	0.203 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Bi-212	pCi/g	0.00	0.0759	0.0759	1.96	0.1042 U	0.313 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Pb-214	pCi/g	0.137	0.049	0.0510	1.96	0.011	0.0337	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Pb-212	pCi/g	-0.03331	0.0795	0.0796	1.96	0.0648 U	0.138 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Eu-154	pCi/g	0.07142	0.0529	0.0534	1.96	0.0408	0.0878 U	30
MB 160-524480/1-A	QC_BLK	MB 160-524480/1-A	Soil	Th-232	pCi/g	0.05571	0.109	0.110	1.96	0.0625 U	0.157 U	30
160-43157-1	SAMP	FSS-094-081921	Soil	Ni-63	pCi/g	0.0506	0.873	0.873	1.96	0.729 U	1.52 U	60
160-43157-10	SAMP	FSS-100-082021	Soil	Ni-63	pCi/g	0.133	0.977	0.977	1.96	0.821 U	1.71 U	60
160-43157-11	SAMP	FSS-101-082021	Soil	Ni-63	pCi/g	-0.101	0.903	0.903	1.96	0.770 U	1.61 U	60
160-43157-12	SAMP	FSS-102-082021	Soil	Ni-63	pCi/g	0.956	1.14	1.14	1.96	0.928	1.94 U	60
160-43157-13	SAMP	FSS-103-082021	Soil	Ni-63	pCi/g	0.374	0.861	0.862	1.96	0.715 U	1.49 U	60
160-43157-14	SAMP	FSS-104-082021	Soil	Ni-63	pCi/g	0.523	0.963	0.964	1.96	0.798 U	1.67 U	60
160-43157-15	SAMP	FSS-105-082021	Soil	Ni-63	pCi/g	0.0215	0.910	0.910	1.96	0.776 U	1.62 U	60
160-43157-16	SAMP	FSS-106-082021	Soil	Ni-63	pCi/g	-0.124	0.932	0.932	1.96	0.797 U	1.66 U	60
160-43157-17	SAMP	FSS-107-082021	Soil	Ni-63	pCi/g	-0.336	0.947	0.947	1.96	0.808 U	1.69 U	60
160-43157-17 DU	QC_DUP	160-43157-17 DU	Soil	Ni-63	pCi/g	-0.1196	1.04	1.04	1.96	0.883 U	1.84 U	60
160-43157-18	SAMP	FSS-108-082021	Soil	Ni-63	pCi/g	0.245	0.849	0.849	1.96	0.714 U	1.49 U	60
160-43157-19	SAMP	FSS-109-082021	Soil	Ni-63	pCi/g	0.298	0.748	0.748	1.96	0.622 U	1.30 U	60
160-43157-2	SAMP	FSS-095-081921	Soil	Ni-63	pCi/g	-0.302	0.921	0.921	1.96	0.787 U	1.64 U	60
160-43157-20	SAMP	FSS-110-082021	Soil	Ni-63	pCi/g	0.187	0.798	0.798	1.96	0.678 U	1.42 U	60
160-43157-21	SAMP	FSS-111-082021	Soil	Ni-63	pCi/g	0.979	0.889	0.895	1.96	0.728	1.52 U	60
160-43157-22	SAMP	FSS-112-082021	Soil	Ni-63	pCi/g	0.0748	0.811	0.811	1.96	0.693 U	1.45 U	60
160-43157-23	SAMP	FSS-113-082021	Soil	Ni-63	pCi/g	-0.172	0.806	0.807	1.96	0.695 U	1.45 U	60
160-43157-24	SAMP	FSS-114-082021	Soil	Ni-63	pCi/g	0.114	0.825	0.825	1.96	0.702 U	1.47 U	60
160-43157-3	SAMP	FSS-096-081921	Soil	Ni-63	pCi/g	-0.237	0.780	0.780	1.96	0.664 U	1.39 U	60
160-43157-4	SAMP	FSS-097-081921	Soil	Ni-63	pCi/g	-0.0442	0.877	0.877	1.96	0.738 U	1.54 U	60
160-43157-5	SAMP	FSS-297-081921	Soil	Ni-63	pCi/g	-0.173	0.845	0.846	1.96	0.720 U	1.50 U	60
160-43157-6	SAMP	FSS-098-082021	Soil	Ni-63	pCi/g	-0.265	1.88	1.89	1.96	1.61 U	3.36 U	60
160-43157-7	SAMP	FSS-298-082021	Soil	Ni-63	pCi/g	0.797	0.925	0.929	1.96	0.760	1.59 U	60
160-43157-8	SAMP	FSS-099-082021	Soil	Ni-63	pCi/g	0.385	1.02	1.02	1.96	0.844 U	1.76 U	60
160-43157-9	SAMP	FSS-299-082021	Soil	Ni-63	pCi/g	0.484	0.927	0.928	1.96	0.764 U	1.60 U	60
LCS 160-527389/2-A	QC_LCS	LCS 160-527389/2-A	Soil	Ni-63	pCi/g	21.68	1.86	2.89	1.96	0.926	1.93	60
LCS 160-527434/2-A	QC_LCS	LCS 160-527434/2-A	Soil	Ni-63	pCi/g	17.81	1.41	2.30	1.96	0.671	1.40	60
MB 160-527389/1-A	QC_BLK	MB 160-527389/1-A	Soil	Ni-63	pCi/g	0.7503	1.000000	1.01	1.96	0.828 U	1.73 U	60
MB 160-527434/1-A	QC_BLK	MB 160-527434/1-A	Soil	Ni-63	pCi/g	0.6825	1.08	1.08	1.96	0.896 U	1.87 U	60
160-43157-1	SAMP	FSS-094-081921	Soil	Pu-241	pCi/g	-0.888	1.10	1.11	1.96	0.886 U	1.86 U	60
160-43157-10	SAMP	FSS-100-082021	Soil	Pu-241	pCi/g	0.637	1.32	1.32	1.96	1.06 U	2.28 U	30
160-43157-11	SAMP	FSS-101-082021	Soil	Pu-241	pCi/g	0.537	1.39	1.40	1.96	1.13 U	2.43 U	30
160-43157-12	SAMP	FSS-102-082021	Soil	Pu-241	pCi/g	0.0441	1.39	1.39	1.96	1.16 U	2.48 U	30
160-43157-13	SAMP	FSS-103-082021	Soil	Pu-241	pCi/g	0.0318	1.54	1.54	1.96	1.30 U	2.78 U	30
160-43157-14	SAMP	FSS-104-082021	Soil	Pu-241	pCi/g	-0.019	1.38	1.38	1.96	1.16 U	2.48 U	30
160-43157-15	SAMP	FSS-105-082021	Soil	Pu-241	pCi/g	1.40	1.51	1.52	1.96	1.19	2.55 U	30
160-43157-16	SAMP	FSS-106-082021	Soil	Pu-241	pCi/g	0.257	1.52	1.52	1.96	1.26 U	2.71 U	30
160-43157-17	SAMP	FSS-107-082021	Soil	Pu-241	pCi/g	0.117	1.39	1.39	1.96	1.16 U	2.48 U	30
160-43157-18	SAMP	FSS-108-082021	Soil	Pu-241	pCi/g	0.0627	1.29	1.29	1.96	1.07 U	2.30 U	30
160-43157-19	SAMP	FSS-109-082021	Soil	Pu-241	pCi/g	0.378	1.50	1.51	1.96	1.24 U	2.65 U	30
160-43157-2	SAMP	FSS-095-081921	Soil	Pu-241	pCi/g	-1.39	1.65	1.66	1.96	1.32 U	2.78 U	60
160-43157-20	SAMP	FSS-110-082021	Soil	Pu-241	pCi/g	0.621	1.55	1.56	1.96	1.28 U	2.75 U	30
160-43157-21	SAMP	FSS-111-082021	Soil	Pu-241	pCi/g	-0.541	1.32	1.32	1.96	1.13 U	2.41 U	30
160-43157-22	SAMP	FSS-112-082021	Soil	Pu-241	pCi/g	-0.224	1.45	1.45	1.96	1.22 U	2.62 U	30
160-43157-23	SAMP	FSS-113-082021	Soil	Pu-241	pCi/g	-0.206	1.64	1.64	1.96	1.40 U	2.99 U	30
160-43157-24	SAMP	FSS-114-082021	Soil	Pu-241	pCi/g	0.018	1.63	1.63	1.96	1.14 U	2.52 U	30
160-43157-24 DU	QC_DUP	160-43157-24 DU	Soil	Pu-241	pCi/g	0.9626	1.57	1.57	1.96	1.04 U	2.29 U	30
160-43157-3	SAMP	FSS-096-081921	Soil	Pu-241	pCi/g	-1.08	1.44	1.44	1.96	1.16 U	2.44 U	60
160-43157-4	SAMP	FSS-097-081921	Soil	Pu-241	pCi/g	0.119	1.26	1.26	1.96	1.05 U	2.25 U	30
160-43157-4 DU	QC_DUP	160-43157-4 DU	Soil	Pu-241	pCi/g	0.09504	1.24	1.24	1.96	1.03 U	2.22 U	30
160-43157-5	SAMP	FSS-297-081921	Soil	Pu-241	pCi/g	-0.126	1.20	1.20	1.96	1.01 U	2.16 U	30
160-43157-6	SAMP	FSS-098-082021	Soil	Pu-241	pCi/g	0.184	1.32	1.32	1.96	1.10 U	2.35 U	30

160-43157-7	SAMP	FSS-298-082021	Soil	Pu-241	pCi/g	0.326	1.40	1.40	1.96	1.15 U	2.48 U	30
160-43157-8	SAMP	FSS-099-082021	Soil	Pu-241	pCi/g	0.172	1.55	1.55	1.96	1.34 U	2.88 U	30
160-43157-9	SAMP	FSS-299-082021	Soil	Pu-241	pCi/g	0.116	1.35	1.35	1.96	1.12 U	2.41 U	30
LCS 160-525621/2-A	QC_LCS	LCS 160-525621/2-A	Soil	Pu-241	pCi/g	25.63	2.81	3.61	1.96	1.48	3.12	60
LCS 160-525766/2-A	QC_LCS	LCS 160-525766/2-A	Soil	Pu-241	pCi/g	18.07	2.32	2.81	1.96	1.09	2.34	30
LCS 160-526533/2-A	QC_LCS	LCS 160-526533/2-A	Soil	Pu-241	pCi/g	22.3	3.33	3.87	1.96	1.32	2.92	30
MB 160-525621/1-A	QC_BLK	MB 160-525621/1-A	Soil	Pu-241	pCi/g	0.3016	1.35	1.35	1.96	1.13 U	2.37 U	60
MB 160-525766/1-A	QC_BLK	MB 160-525766/1-A	Soil	Pu-241	pCi/g	-0.4197	1.37	1.37	1.96	1.18 U	2.52 U	30
MB 160-526533/1-A	QC_BLK	MB 160-526533/1-A	Soil	Pu-241	pCi/g	1.213	1.64	1.65	1.96	1.10	2.42 U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43195-1	SAMP	FSS-115-082421	Soil	Sr-90	pCi/g	-0.0154	0.242	0.242	1.96	0.204	U	0.441	U	200
160-43195-10	SAMP	FSS-124-082421	Soil	Sr-90	pCi/g	0.116	0.164	0.165	1.96	0.129	U	0.281	U	200
160-43195-10 DU	QC_DUP	160-43195-10 DU	Soil	Sr-90	pCi/g	-0.02872	0.166	0.166	1.96	0.141	U	0.305	U	200
160-43195-11	SAMP	FSS-125-082421	Soil	Sr-90	pCi/g	0.0901	0.161	0.161	1.96	0.128	U	0.278	U	200
160-43195-12	SAMP	FSS-126-082421	Soil	Sr-90	pCi/g	-0.0326	0.133	0.133	1.96	0.114	U	0.251	U	200
160-43195-13	SAMP	FSS-127-082421	Soil	Sr-90	pCi/g	0.0572	0.173	0.173	1.96	0.141	U	0.307	U	200
160-43195-14	SAMP	FSS-128-082421	Soil	Sr-90	pCi/g	0.217	0.174	0.175	1.96	0.129		0.282	U	200
160-43195-15	SAMP	FSS-129-082421	Soil	Sr-90	pCi/g	0.0271	0.147	0.147	1.96	0.121	U	0.265	U	200
160-43195-16	SAMP	FSS-130-082421	Soil	Sr-90	pCi/g	0.0500	0.121	0.121	1.96	0.096	U	0.214	U	200
160-43195-17	SAMP	FSS-131-082421	Soil	Sr-90	pCi/g	0.144	0.152	0.152	1.96	0.116		0.253	U	200
160-43195-18	SAMP	FSS-132-082421	Soil	Sr-90	pCi/g	0.118	0.157	0.158	1.96	0.123	U	0.268	U	200
160-43195-2	SAMP	FSS-116-082421	Soil	Sr-90	pCi/g	0.0629	0.180	0.180	1.96	0.145	U	0.319	U	200
160-43195-22	SAMP	FSS-133-082421	Soil	Sr-90	pCi/g	0.351	0.184	0.186	1.96	0.130		0.282		200
160-43195-23	SAMP	FSS-134-082421	Soil	Sr-90	pCi/g	0.112	0.149	0.149	1.96	0.115	U	0.253	U	200
160-43195-24	SAMP	FSS-135-082421	Soil	Sr-90	pCi/g	-0.0667	0.128	0.128	1.96	0.113	U	0.249	U	200
160-43195-25	SAMP	FSS-139-082421	Soil	Sr-90	pCi/g	0.0555	0.158	0.158	1.96	0.129	U	0.278	U	200
160-43195-26	SAMP	FSS-140-082421	Soil	Sr-90	pCi/g	0.0734	0.173	0.173	1.96	0.140	U	0.302	U	200
160-43195-27	SAMP	FSS-141-082421	Soil	Sr-90	pCi/g	0.0615	0.157	0.157	1.96	0.127	U	0.277	U	200
160-43195-28	SAMP	FSS-339-082421	Soil	Sr-90	pCi/g	0.158	0.152	0.153	1.96	0.115		0.252	U	200
160-43195-29	SAMP	FSS-340-082421	Soil	Sr-90	pCi/g	-0.109	0.140	0.140	1.96	0.126	U	0.275	U	200
160-43195-3	SAMP	FSS-117-082421	Soil	Sr-90	pCi/g	0.0701	0.206	0.206	1.96	0.167	U	0.366	U	200
160-43195-30	SAMP	FSS-341-082421	Soil	Sr-90	pCi/g	0.153	0.195	0.195	1.96	0.152		0.330	U	200
160-43195-30 DU	QC_DUP	160-43195-30 DU	Soil	Sr-90	pCi/g	0.09027	0.205	0.205	1.96	0.166	U	0.358	U	200
160-43195-31	SAMP	FSS-142-082421	Soil	Sr-90	pCi/g	-0.193	0.160	0.161	1.96	0.150	U	0.326	U	200
160-43195-32	SAMP	FSS-143-082421	Soil	Sr-90	pCi/g	0.0884	0.162	0.163	1.96	0.129	U	0.283	U	200
160-43195-33	SAMP	FSS-144-082421	Soil	Sr-90	pCi/g	0.137	0.187	0.188	1.96	0.146	U	0.319	U	200
160-43195-4	SAMP	FSS-118-082421	Soil	Sr-90	pCi/g	-0.0368	0.0596	0.0597	1.96	0.060	U	0.152	U	200
160-43195-5	SAMP	FSS-119-082421	Soil	Sr-90	pCi/g	0.350	0.247	0.249	1.96	0.181		0.394	U	200
160-43195-6	SAMP	FSS-120-082421	Soil	Sr-90	pCi/g	0.0736	0.187	0.187	1.96	0.151	U	0.330	U	200
160-43195-7	SAMP	FSS-121-082421	Soil	Sr-90	pCi/g	-0.175	0.136	0.137	1.96	0.131	U	0.289	U	200
160-43195-8	SAMP	FSS-122-082421	Soil	Sr-90	pCi/g	-0.0582	0.168	0.168	1.96	0.146	U	0.319	U	200
160-43195-9	SAMP	FSS-123-082421	Soil	Sr-90	pCi/g	-0.0771	0.167	0.167	1.96	0.147	U	0.320	U	200
LCS 160-527607/2-A	QC_LCS	LCS 160-527607/2-A	Soil	Sr-90	pCi/g	7.718	0.509	0.803	1.96	0.129		0.281		200
LCS 160-527652/2-A	QC_LCS	LCS 160-527652/2-A	Soil	Sr-90	pCi/g	7.087	0.477	0.743	1.96	0.120		0.262		200
MB 160-527607/1-A	QC_BLK	MB 160-527607/1-A	Soil	Sr-90	pCi/g	0.3002	0.202	0.203	1.96	0.149		0.322	U	200
MB 160-527652/1-A	QC_BLK	MB 160-527652/1-A	Soil	Sr-90	pCi/g	0.01279	0.165	0.165	1.96	0.138	U	0.299	U	200
160-43195-1	SAMP	FSS-115-082421	Soil	H-3	pCi/g	-0.105	0.189	0.189	1.96	0.169	U	0.371	U	20
160-43195-10	SAMP	FSS-124-082421	Soil	H-3	pCi/g	0.104	0.192	0.193	1.96	0.151	U	0.337	U	20
160-43195-11	SAMP	FSS-125-082421	Soil	H-3	pCi/g	0.458	0.235	0.238	1.96	0.155		0.346		20
160-43195-12	SAMP	FSS-126-082421	Soil	H-3	pCi/g	0.283	0.212	0.214	1.96	0.150		0.336	U	20
160-43195-13	SAMP	FSS-127-082421	Soil	H-3	pCi/g	0.141	0.201	0.201	1.96	0.155	U	0.346	U	20
160-43195-14	SAMP	FSS-128-082421	Soil	H-3	pCi/g	0.211	0.212	0.212	1.96	0.157		0.352	U	20
160-43195-15	SAMP	FSS-129-082421	Soil	H-3	pCi/g	0.0304	0.187	0.187	1.96	0.154	U	0.345	U	20
160-43195-15 MS	QC_MS	160-43195-15 MS	Soil	H-3	pCi/g	7.329	0.635	0.896	1.96	0.195		0.427		20
160-43195-16	SAMP	FSS-130-082421	Soil	H-3	pCi/g	0.0522	0.194	0.194	1.96	0.159	U	0.356	U	20
160-43195-16 DU	QC_DUP	160-43195-16 DU	Soil	H-3	pCi/g	-0.1475	0.223	0.223	1.96	0.202	U	0.443	U	20
160-43195-17	SAMP	FSS-131-082421	Soil	H-3	pCi/g	-0.0496	0.215	0.215	1.96	0.187	U	0.408	U	20
160-43195-18	SAMP	FSS-132-082421	Soil	H-3	pCi/g	0.0798	0.220	0.220	1.96	0.178	U	0.389	U	20
160-43195-2	SAMP	FSS-116-082421	Soil	H-3	pCi/g	0.152	0.220	0.221	1.96	0.175	U	0.383	U	20
160-43195-2 MS	QC_MS	160-43195-2 MS	Soil	H-3	pCi/g	6.554	0.552	0.790	1.96	0.167		0.366		20
160-43195-22	SAMP	FSS-133-082421	Soil	H-3	pCi/g	-0.111	0.199	0.199	1.96	0.177	U	0.385	U	20
160-43195-23	SAMP	FSS-134-082421	Soil	H-3	pCi/g	0.180	0.224	0.224	1.96	0.173		0.377	U	20
160-43195-24	SAMP	FSS-135-082421	Soil	H-3	pCi/g	-0.0734	0.201	0.201	1.96	0.175	U	0.381	U	20
160-43195-25	SAMP	FSS-139-082421	Soil	H-3	pCi/g	-0.0413	0.206	0.206	1.96	0.176	U	0.384	U	20
160-43195-26	SAMP	FSS-140-082421	Soil	H-3	pCi/g	-0.0298	0.219	0.219	1.96	0.189	U	0.413	U	20
160-43195-27	SAMP	FSS-141-082421	Soil	H-3	pCi/g	-0.0452	0.205	0.205	1.96	0.176	U	0.385	U	20
160-43195-28	SAMP	FSS-339-082421	Soil	H-3	pCi/g	-0.0246	0.214	0.214	1.96	0.183	U	0.398	U	20
160-43195-29	SAMP	FSS-340-082421	Soil	H-3	pCi/g	0.0190	0.215	0.215	1.96	0.180	U	0.393	U	20
160-43195-3	SAMP	FSS-117-082421	Soil	H-3	pCi/g	-0.0166	0.191	0.191	1.96	0.162	U	0.354	U	20
160-43195-3 DU	QC_DUP	160-43195-3 DU	Soil	H-3	pCi/g	0.1936	0.220	0.220	1.96	0.170		0.373	U	20
160-43195-30	SAMP	FSS-341-082421	Soil	H-3	pCi/g	0.0615	0.217	0.217	1.96	0.178	U	0.389	U	20
160-43195-31	SAMP	FSS-142-082421	Soil	H-3	pCi/g	0.0798	0.225	0.225	1.96	0.184	U	0.400	U	20

160-43195-32	SAMP	FSS-143-082421	Soil	H-3	pCi/g	-0.0286	0.203	0.203	1.96	0.172	U	0.375	U	20
160-43195-32 MS	QC_MS	160-43195-32 MS	Soil	H-3	pCi/g	6.093	0.527	0.744	1.96	0.168		0.367		20
160-43195-33	SAMP	FSS-144-082421	Soil	H-3	pCi/g	0.0278	0.219	0.219	1.96	0.183	U	0.399	U	20
160-43195-33 DU	QC_DUP	160-43195-33 DU	Soil	H-3	pCi/g	0.03562	0.212	0.212	1.96	0.175	U	0.381	U	20
160-43195-4	SAMP	FSS-118-082421	Soil	H-3	pCi/g	0.0437	0.189	0.189	1.96	0.155	U	0.346	U	20
160-43195-5	SAMP	FSS-119-082421	Soil	H-3	pCi/g	0.144	0.197	0.197	1.96	0.151	U	0.338	U	20
160-43195-6	SAMP	FSS-120-082421	Soil	H-3	pCi/g	0.167	0.207	0.207	1.96	0.158		0.354	U	20
160-43195-7	SAMP	FSS-121-082421	Soil	H-3	pCi/g	-0.0101	0.174	0.174	1.96	0.148	U	0.330	U	20
160-43195-8	SAMP	FSS-122-082421	Soil	H-3	pCi/g	0.00963	0.182	0.182	1.96	0.153	U	0.343	U	20
160-43195-9	SAMP	FSS-123-082421	Soil	H-3	pCi/g	0.211	0.200	0.201	1.96	0.147		0.329	U	20
LCS 160-527613/2-A	QC_LCS	LCS 160-527613/2-A	Soil	H-3	pCi/g	7.084	0.592	0.850	1.96	0.178		0.390		20
LCS 160-527614/2-A	QC_LCS	LCS 160-527614/2-A	Soil	H-3	pCi/g	7.587	0.617	0.900	1.96	0.150		0.337		20
LCS 160-527693/2-A	QC_LCS	LCS 160-527693/2-A	Soil	H-3	pCi/g	7.083	0.575	0.839	1.96	0.175		0.382		20
MB 160-527613/1-A	QC_BLK	MB 160-527613/1-A	Soil	H-3	pCi/g	0.03303	0.212	0.212	1.96	0.179	U	0.392	U	20
MB 160-527614/1-A	QC_BLK	MB 160-527614/1-A	Soil	H-3	pCi/g	0.02282	0.180	0.180	1.96	0.150	U	0.335	U	20
MB 160-527693/1-A	QC_BLK	MB 160-527693/1-A	Soil	H-3	pCi/g	-0.03664	0.205	0.206	1.96	0.175	U	0.381	U	20
160-43195-1	SAMP	FSS-115-082421	Soil	Pu-238	pCi/g	-0.00817	0.0256	0.0256	1.96	0.0265	U	0.0857	U	240
160-43195-1	SAMP	FSS-115-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00273	0.00534	0.00535	1.96	0.0100	U	0.0528	U	240
160-43195-10	SAMP	FSS-124-082421	Soil	Pu-238	pCi/g	0.00	0.00789	0.00789	1.96	0.0148	U	0.0483	U	240
160-43195-10	SAMP	FSS-124-082421	Soil	Pu-239/Pu-240	pCi/g	0.0161	0.0316	0.0316	1.96	0.0148		0.0484	U	240
160-43195-11	SAMP	FSS-125-082421	Soil	Pu-238	pCi/g	-0.00406	0.00796	0.00796	1.96	0.0149	U	0.0786	U	240
160-43195-11	SAMP	FSS-125-082421	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00797	0.00797	1.96	0.0149	U	0.0488	U	240
160-43195-12	SAMP	FSS-126-082421	Soil	Pu-238	pCi/g	0.0044	0.0328	0.0328	1.96	0.0256	U	0.0775	U	240
160-43195-12	SAMP	FSS-126-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0044	0.0202	0.0202	1.96	0.0198	U	0.0661	U	240
160-43195-13	SAMP	FSS-127-082421	Soil	Pu-238	pCi/g	-0.0341	0.0374	0.0375	1.96	0.0442	U	0.120	U	240
160-43195-13	SAMP	FSS-127-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0131	0.0257	0.0257	1.96	0.0289	U	0.0893	U	240
160-43195-14	SAMP	FSS-128-082421	Soil	Pu-238	pCi/g	0.00594	0.0359	0.0359	1.96	0.0268	U	0.0892	U	240
160-43195-14	SAMP	FSS-128-082421	Soil	Pu-239/Pu-240	pCi/g	0.00892	0.0240	0.0240	1.96	0.0109	U	0.0576	U	240
160-43195-15	SAMP	FSS-129-082421	Soil	Pu-238	pCi/g	0.0448	0.0539	0.0540	1.96	0.0245		0.0849	U	240
160-43195-15	SAMP	FSS-129-082421	Soil	Pu-239/Pu-240	pCi/g	0.00299	0.0255	0.0255	1.96	0.0190	U	0.0739	U	240
160-43195-16	SAMP	FSS-130-082421	Soil	Pu-238	pCi/g	0.034	0.0387	0.0388	1.96	0.0127		0.0545	U	240
160-43195-16	SAMP	FSS-130-082421	Soil	Pu-239/Pu-240	pCi/g	0.00243	0.0298	0.0298	1.96	0.0237	U	0.0766	U	240
160-43195-17	SAMP	FSS-131-082421	Soil	Pu-238	pCi/g	-0.00469	0.00649	0.00651	1.96	0.0122	U	0.0525	U	240
160-43195-17	SAMP	FSS-131-082421	Soil	Pu-239/Pu-240	pCi/g	0.00469	0.0195	0.0195	1.96	0.0122	U	0.0525	U	240
160-43195-18	SAMP	FSS-132-082421	Soil	Pu-238	pCi/g	-0.0024	0.00469	0.0047	1.96	0.0088	U	0.0464	U	240
160-43195-18	SAMP	FSS-132-082421	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0047	0.0047	1.96	0.0088	U	0.0288	U	240
160-43195-2	SAMP	FSS-116-082421	Soil	Pu-238	pCi/g	-0.0109	0.0106	0.0107	1.96	0.0200	U	0.0725	U	240
160-43195-2	SAMP	FSS-116-082421	Soil	Pu-239/Pu-240	pCi/g	0.00815	0.0220	0.0220	1.96	0.0100	U	0.0526	U	240
160-43195-22	SAMP	FSS-133-082421	Soil	Pu-238	pCi/g	0.0211	0.0293	0.0293	1.96	0.0110		0.0474	U	240
160-43195-22	SAMP	FSS-133-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00212	0.00415	0.00415	1.96	0.0078	U	0.0410	U	240
160-43195-23	SAMP	FSS-134-082421	Soil	Pu-238	pCi/g	0.0205	0.0284	0.0285	1.96	0.0107		0.0459	U	240
160-43195-23	SAMP	FSS-134-082421	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0180	0.0180	1.96	0.0151	U	0.0548	U	240
160-43195-24	SAMP	FSS-135-082421	Soil	Pu-238	pCi/g	-0.0116	0.0242	0.0242	1.96	0.0255	U	0.0742	U	600
160-43195-24	SAMP	FSS-135-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00482	0.00944	0.00945	1.96	0.0128	U	0.0487	U	600
160-43195-25	SAMP	FSS-139-082421	Soil	Pu-238	pCi/g	0.00411	0.0307	0.0307	1.96	0.0239	U	0.0724	U	240
160-43195-25	SAMP	FSS-139-082421	Soil	Pu-239/Pu-240	pCi/g	0.00411	0.0248	0.0248	1.96	0.0185	U	0.0617	U	240
160-43195-26	SAMP	FSS-140-082421	Soil	Pu-238	pCi/g	-0.0175	0.0317	0.0317	1.96	0.0328	U	0.0890	U	240
160-43195-26	SAMP	FSS-140-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0175	0.0115	0.0115	1.96	0.0215	U	0.0664	U	240
160-43195-27	SAMP	FSS-141-082421	Soil	Pu-238	pCi/g	0.0141	0.0339	0.0339	1.96	0.0212	U	0.0706	U	240
160-43195-27	SAMP	FSS-141-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00235	0.00462	0.00462	1.96	0.0087	U	0.0456	U	240
160-43195-28	SAMP	FSS-339-082421	Soil	Pu-238	pCi/g	0.00537	0.0213	0.0213	1.96	0.0147	U	0.0509	U	240
160-43195-28	SAMP	FSS-339-082421	Soil	Pu-239/Pu-240	pCi/g	0.00895	0.0208	0.0208	1.96	0.0114	U	0.0443	U	240
160-43195-29	SAMP	FSS-340-082421	Soil	Pu-238	pCi/g	0.0438	0.0386	0.0388	1.96	0.0104		0.0446	U	240
160-43195-29	SAMP	FSS-340-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00598	0.0187	0.0187	1.96	0.0194	U	0.0627	U	240
160-43195-3	SAMP	FSS-117-082421	Soil	Pu-238	pCi/g	0.0211	0.0388	0.0388	1.96	0.0228	U	0.0739	U	240
160-43195-3	SAMP	FSS-117-082421	Soil	Pu-239/Pu-240	pCi/g	0.00705	0.0190	0.0190	1.96	0.0086	U	0.0455	U	240
160-43195-30	SAMP	FSS-341-082421	Soil	Pu-238	pCi/g	-0.002	0.00391	0.00391	1.96	0.0073	U	0.0386	U	240
160-43195-30	SAMP	FSS-341-082421	Soil	Pu-239/Pu-240	pCi/g	-0.002	0.00392	0.00392	1.96	0.0073	U	0.0387	U	240
160-43195-31	SAMP	FSS-142-082421	Soil	Pu-238	pCi/g	0.00579	0.0156	0.0156	1.96	0.0071	U	0.0374	U	240
160-43195-31	SAMP	FSS-142-082421	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00379	0.00379	1.96	0.0071	U	0.0232	U	240
160-43195-32	SAMP	FSS-143-082421	Soil	Pu-238	pCi/g	-0.0219	0.0217	0.0218	1.96	0.0283	U	0.0805	U	240
160-43195-32	SAMP	FSS-143-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0199	0.0276	0.0276	1.96	0.0311	U	0.0860	U	240
160-43195-33	SAMP	FSS-144-082421	Soil	Pu-238	pCi/g	-0.0045	0.00623	0.00624	1.96	0.0117	U	0.0504	U	240

160-43195-33	SAMP	FSS-144-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0045	0.00624	0.00625	1.96	0.0117	U	0.0504	U	240
160-43195-4	SAMP	FSS-118-082421	Soil	Pu-238	pCi/g	0.00308	0.0463	0.0463	1.96	0.0375	U	0.112	U	240
160-43195-4	SAMP	FSS-118-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00616	0.00854	0.00855	1.96	0.0160	U	0.0690	U	240
160-43195-5	SAMP	FSS-119-082421	Soil	Pu-238	pCi/g	0.0248	0.0462	0.0462	1.96	0.0299	U	0.0869	U	240
160-43195-5	SAMP	FSS-119-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00677	0.00767	0.00769	1.96	0.0144	U	0.0559	U	240
160-43195-6	SAMP	FSS-120-082421	Soil	Pu-238	pCi/g	0.017	0.0352	0.0353	1.96	0.0220	U	0.0695	U	240
160-43195-6	SAMP	FSS-120-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00212	0.00416	0.00416	1.96	0.0078	U	0.0411	U	240
160-43195-7	SAMP	FSS-121-082421	Soil	Pu-238	pCi/g	0.0154	0.0247	0.0247	1.96	0.0081		0.0425	U	240
160-43195-7	SAMP	FSS-121-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00439	0.00609	0.0061	1.96	0.0114	U	0.0492	U	240
160-43195-8	SAMP	FSS-122-082421	Soil	Pu-238	pCi/g	-0.0258	0.0239	0.024	1.96	0.0317	U	0.0892	U	240
160-43195-8	SAMP	FSS-122-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0259	0.0146	0.0148	1.96	0.0275	U	0.0808	U	240
160-43195-9	SAMP	FSS-123-082421	Soil	Pu-238	pCi/g	-0.0105	0.0145	0.0145	1.96	0.0272	U	0.117	U	240
160-43195-9	SAMP	FSS-123-082421	Soil	Pu-239/Pu-240	pCi/g	0.0315	0.0599	0.06	1.96	0.0273		0.117	U	240
LCS 160-526438/2-/	QC_LCS	LCS 160-526438/2-A	Soil	Pu-238	pCi/g	4.862	0.422	0.581	1.96	0.0175		0.0634		240
LCS 160-526438/2-/	QC_LCS	LCS 160-526438/2-A	Soil	Pu-239/Pu-240	pCi/g	5.311	0.441	0.621	1.96	0.00874		0.0460		240
LCS 160-526439/2-/	QC_LCS	LCS 160-526439/2-A	Soil	Pu-238	pCi/g	5.349	0.380	0.581	1.96	0.0231		0.0672		240
LCS 160-526439/2-/	QC_LCS	LCS 160-526439/2-A	Soil	Pu-239/Pu-240	pCi/g	4.918	0.363	0.544	1.96	0.0111		0.0432		240
LCS 160-528277/2-/	QC_LCS	LCS 160-528277/2-A	Soil	Pu-238	pCi/g	10.46	0.779	1.16	1.96	0.0139		0.0731		240
LCS 160-528277/2-/	QC_LCS	LCS 160-528277/2-A	Soil	Pu-239/Pu-240	pCi/g	10.26	0.772	1.14	1.96	0.0139		0.0454		240
LCSD 160-528277/3	QC_LCSD	LCSD 160-528277/3-A	Soil	Pu-238	pCi/g	10.45	0.791	1.17	1.96	0.0552		0.157		240
LCSD 160-528277/3	QC_LCSD	LCSD 160-528277/3-A	Soil	Pu-239/Pu-240	pCi/g	10.76	0.804	1.20	1.96	0.0605		0.168		240
MB 160-526438/1-/	QC_BLK	MB 160-526438/1-A	Soil	Pu-238	pCi/g	-0.00208	0.00408	0.00408	1.96	0.00765	U	0.0403	U	240
MB 160-526438/1-/	QC_BLK	MB 160-526438/1-A	Soil	Pu-239/Pu-240	pCi/g	-0.002082	0.00408	0.00408	1.96	0.00766	U	0.0403	U	240
MB 160-526439/1-/	QC_BLK	MB 160-526439/1-A	Soil	Pu-238	pCi/g	-0.02059	0.0122	0.0123	1.96	0.0228	U	0.0681	U	240
MB 160-526439/1-/	QC_BLK	MB 160-526439/1-A	Soil	Pu-239/Pu-240	pCi/g	0.01124	0.0214	0.0214	1.96	0.00975		0.0420	U	240
MB 160-528277/1-/	QC_BLK	MB 160-528277/1-A	Soil	Pu-238	pCi/g	0.02778	0.0447	0.0447	1.96	0.0146		0.0768	U	240
MB 160-528277/1-/	QC_BLK	MB 160-528277/1-A	Soil	Pu-239/Pu-240	pCi/g	0.01192	0.0321	0.0321	1.96	0.0146	U	0.0769	U	240
160-43195-1	SAMP	FSS-115-082421	Soil	U-233/U-234	pCi/g	0.226	0.0948	0.0966	1.96	0.0216		0.0720		240
160-43195-1	SAMP	FSS-115-082421	Soil	U-235/U-236	pCi/g	0.0328	0.041	0.0411	1.96	0.0110		0.0578	U	240
160-43195-1	SAMP	FSS-115-082421	Soil	U-238	pCi/g	0.35	0.114	0.118	1.96	0.0125		0.0536		240
160-43195-10	SAMP	FSS-124-082421	Soil	U-233/U-234	pCi/g	0.239	0.140	0.141	1.96	0.0566		0.163		240
160-43195-10	SAMP	FSS-124-082421	Soil	U-235/U-236	pCi/g	-0.00512	0.046	0.046	1.96	0.0421	U	0.146	U	240
160-43195-10	SAMP	FSS-124-082421	Soil	U-238	pCi/g	0.275	0.133	0.135	1.96	0.0151		0.0795		240
160-43195-11	SAMP	FSS-125-082421	Soil	U-233/U-234	pCi/g	0.353	0.160	0.162	1.96	0.0388		0.129		240
160-43195-11	SAMP	FSS-125-082421	Soil	U-235/U-236	pCi/g	0.059	0.0735	0.0737	1.96	0.0197		0.104	U	240
160-43195-11	SAMP	FSS-125-082421	Soil	U-238	pCi/g	0.434	0.172	0.176	1.96	0.0274		0.106		240
160-43195-12	SAMP	FSS-126-082421	Soil	U-233/U-234	pCi/g	0.189	0.0831	0.0846	1.96	0.0198		0.0658		240
160-43195-12	SAMP	FSS-126-082421	Soil	U-235/U-236	pCi/g	-0.00819	0.0257	0.0257	1.96	0.0266	U	0.0859	U	240
160-43195-12	SAMP	FSS-126-082421	Soil	U-238	pCi/g	0.129	0.0693	0.0701	1.96	0.0180		0.0623		240
160-43195-13	SAMP	FSS-127-082421	Soil	U-233/U-234	pCi/g	0.132	0.0694	0.0703	1.96	0.0118		0.0510		240
160-43195-13	SAMP	FSS-127-082421	Soil	U-235/U-236	pCi/g	0.0085	0.0229	0.0229	1.96	0.0104	U	0.0549	U	240
160-43195-13	SAMP	FSS-127-082421	Soil	U-238	pCi/g	0.164	0.0756	0.0768	1.96	0.0084		0.0273		240
160-43195-14	SAMP	FSS-128-082421	Soil	U-233/U-234	pCi/g	0.0973	0.0727	0.0731	1.96	0.0331		0.0961		240
160-43195-14	SAMP	FSS-128-082421	Soil	U-235/U-236	pCi/g	0.00931	0.0251	0.0251	1.96	0.0114	U	0.0601	U	240
160-43195-14	SAMP	FSS-128-082421	Soil	U-238	pCi/g	0.224	0.0938	0.0956	1.96	0.0129		0.0558		240
160-43195-15	SAMP	FSS-129-082421	Soil	U-233/U-234	pCi/g	0.185	0.0880	0.0893	1.96	0.0100		0.0327		240
160-43195-15	SAMP	FSS-129-082421	Soil	U-235/U-236	pCi/g	0.0135	0.0266	0.0266	1.96	0.0125		0.0406	U	240
160-43195-15	SAMP	FSS-129-082421	Soil	U-238	pCi/g	0.283	0.109	0.111	1.96	0.0100		0.0326		240
160-43195-16	SAMP	FSS-130-082421	Soil	U-233/U-234	pCi/g	0.236	0.0956	0.0976	1.96	0.0155		0.0601		240
160-43195-16	SAMP	FSS-130-082421	Soil	U-235/U-236	pCi/g	0.0121	0.0237	0.0237	1.96	0.0111		0.0363	U	240
160-43195-16	SAMP	FSS-130-082421	Soil	U-238	pCi/g	0.233	0.0932	0.0951	1.96	0.0089		0.0291		240
160-43195-17	SAMP	FSS-131-082421	Soil	U-233/U-234	pCi/g	0.226	0.0907	0.0926	1.96	0.0120		0.0517		240
160-43195-17	SAMP	FSS-131-082421	Soil	U-235/U-236	pCi/g	0.00862	0.0232	0.0232	1.96	0.0106	U	0.0556	U	240
160-43195-17	SAMP	FSS-131-082421	Soil	U-238	pCi/g	0.313	0.105	0.108	1.96	0.0085		0.0276		240
160-43195-18	SAMP	FSS-132-082421	Soil	U-233/U-234	pCi/g	0.178	0.0851	0.0864	1.96	0.0182		0.0661		240
160-43195-18	SAMP	FSS-132-082421	Soil	U-235/U-236	pCi/g	0.0154	0.0357	0.0357	1.96	0.0196	U	0.0762	U	240
160-43195-18	SAMP	FSS-132-082421	Soil	U-238	pCi/g	0.170	0.0826	0.0838	1.96	0.0157		0.0611		240
160-43195-2	SAMP	FSS-116-082421	Soil	U-233/U-234	pCi/g	0.265	0.107	0.109	1.96	0.0291		0.0883		240
160-43195-2	SAMP	FSS-116-082421	Soil	U-235/U-236	pCi/g	0.0343	0.0427	0.0428	1.96	0.0115		0.0603	U	240
160-43195-2	SAMP	FSS-116-082421	Soil	U-238	pCi/g	0.315	0.111	0.114	1.96	0.0130		0.0560		240
160-43195-22	SAMP	FSS-133-082421	Soil	U-233/U-234	pCi/g	0.496	0.132	0.138	1.96	0.0226		0.0714		240
160-43195-22	SAMP	FSS-133-082421	Soil	U-235/U-236	pCi/g	0.00541	0.0225	0.0225	1.96	0.0141	U	0.0606	U	240
160-43195-22	SAMP	FSS-133-082421	Soil	U-238	pCi/g	0.395	0.116	0.120	1.96	0.0113		0.0486		240

160-43195-23	SAMP	FSS-134-082421	Soil	U-233/U-234	pCi/g	0.173	0.0792	0.0805	1.96	0.0180		0.0622		240
160-43195-23	SAMP	FSS-134-082421	Soil	U-235/U-236	pCi/g	0.00272	0.0233	0.0233	1.96	0.0173	U	0.0674	U	240
160-43195-23	SAMP	FSS-134-082421	Soil	U-238	pCi/g	0.168	0.0769	0.0782	1.96	0.0139		0.0540		240
160-43195-24	SAMP	FSS-135-082421	Soil	U-233/U-234	pCi/g	0.284	0.150	0.151	1.96	0.0348		0.126		240
160-43195-24	SAMP	FSS-135-082421	Soil	U-235/U-236	pCi/g	0.0177	0.0476	0.0476	1.96	0.0217	U	0.114	U	240
160-43195-24	SAMP	FSS-135-082421	Soil	U-238	pCi/g	0.335	0.163	0.165	1.96	0.0388		0.134		240
160-43195-25	SAMP	FSS-139-082421	Soil	U-233/U-234	pCi/g	0.191	0.0842	0.0856	1.96	0.0200		0.0667		240
160-43195-25	SAMP	FSS-139-082421	Soil	U-235/U-236	pCi/g	0.0304	0.0379	0.038	1.96	0.0102		0.0535	U	240
160-43195-25	SAMP	FSS-139-082421	Soil	U-238	pCi/g	0.264	0.0972	0.0996	1.96	0.0182		0.0631		240
160-43195-26	SAMP	FSS-140-082421	Soil	U-233/U-234	pCi/g	0.215	0.0886	0.0903	1.96	0.0280		0.0803		240
160-43195-26	SAMP	FSS-140-082421	Soil	U-235/U-236	pCi/g	0.0481	0.0498	0.0500	1.96	0.0208		0.0720	U	240
160-43195-26	SAMP	FSS-140-082421	Soil	U-238	pCi/g	0.250	0.0886	0.0910	1.96	0.0075		0.0393		240
160-43195-27	SAMP	FSS-141-082421	Soil	U-233/U-234	pCi/g	0.143	0.0728	0.0737	1.96	0.0195		0.0650		240
160-43195-27	SAMP	FSS-141-082421	Soil	U-235/U-236	pCi/g	0.00808	0.0218	0.0218	1.96	0.0099	U	0.0522	U	240
160-43195-27	SAMP	FSS-141-082421	Soil	U-238	pCi/g	0.270	0.0961	0.0987	1.96	0.0138		0.0535		240
160-43195-28	SAMP	FSS-339-082421	Soil	U-233/U-234	pCi/g	0.298	0.101	0.104	1.96	0.0189		0.0631		240
160-43195-28	SAMP	FSS-339-082421	Soil	U-235/U-236	pCi/g	0.0392	0.0413	0.0414	1.96	0.0096		0.0506	U	240
160-43195-28	SAMP	FSS-339-082421	Soil	U-238	pCi/g	0.352	0.108	0.112	1.96	0.0154		0.0560		240
160-43195-29	SAMP	FSS-340-082421	Soil	U-233/U-234	pCi/g	0.264	0.0948	0.0973	1.96	0.0113		0.0486		240
160-43195-29	SAMP	FSS-340-082421	Soil	U-235/U-236	pCi/g	0.0108	0.0211	0.0212	1.96	0.0099		0.0324	U	240
160-43195-29	SAMP	FSS-340-082421	Soil	U-238	pCi/g	0.303	0.100	0.103	1.96	0.0080		0.0260		240
160-43195-3	SAMP	FSS-117-082421	Soil	U-233/U-234	pCi/g	0.270	0.0999	0.102	1.96	0.0089		0.0289		240
160-43195-3	SAMP	FSS-117-082421	Soil	U-235/U-236	pCi/g	0.039	0.0481	0.0482	1.96	0.0191		0.0742	U	240
160-43195-3	SAMP	FSS-117-082421	Soil	U-238	pCi/g	0.262	0.100	0.102	1.96	0.0153		0.0595		240
160-43195-30	SAMP	FSS-341-082421	Soil	U-233/U-234	pCi/g	0.231	0.0891	0.0911	1.96	0.0114		0.0489		240
160-43195-30	SAMP	FSS-341-082421	Soil	U-235/U-236	pCi/g	0.0434	0.0426	0.0427	1.96	0.0100		0.0326		240
160-43195-30	SAMP	FSS-341-082421	Soil	U-238	pCi/g	0.287	0.0981	0.101	1.96	0.00801		0.0261		240
160-43195-31	SAMP	FSS-142-082421	Soil	U-233/U-234	pCi/g	0.316	0.102	0.106	1.96	0.0211		0.0665		240
160-43195-31	SAMP	FSS-142-082421	Soil	U-235/U-236	pCi/g	0.0252	0.0350	0.0350	1.96	0.0131		0.0565	U	240
160-43195-31	SAMP	FSS-142-082421	Soil	U-238	pCi/g	0.235	0.0891	0.0911	1.96	0.0211		0.0664		240
160-43195-32	SAMP	FSS-143-082421	Soil	U-233/U-234	pCi/g	0.242	0.0926	0.0947	1.96	0.0232		0.0716		240
160-43195-32	SAMP	FSS-143-082421	Soil	U-235/U-236	pCi/g	0.00785	0.0211	0.0211	1.96	0.00962	U	0.0506	U	240
160-43195-32	SAMP	FSS-143-082421	Soil	U-238	pCi/g	0.279	0.0962	0.0989	1.96	0.0134		0.0519		240
160-43195-33	SAMP	FSS-144-082421	Soil	U-233/U-234	pCi/g	0.358	0.104	0.108	1.96	0.00719		0.0378		240
160-43195-33	SAMP	FSS-144-082421	Soil	U-235/U-236	pCi/g	0.017	0.0274	0.0274	1.96	0.00895		0.0471	U	240
160-43195-33	SAMP	FSS-144-082421	Soil	U-238	pCi/g	0.396	0.111	0.115	1.96	0.0160		0.0555		240
160-43195-4	SAMP	FSS-118-082421	Soil	U-233/U-234	pCi/g	0.115	0.0936	0.0940	1.96	0.0531		0.138	U	240
160-43195-4	SAMP	FSS-118-082421	Soil	U-235/U-236	pCi/g	-0.0234	0.0535	0.0536	1.96	0.0535	U	0.147	U	240
160-43195-4	SAMP	FSS-118-082421	Soil	U-238	pCi/g	0.123	0.0802	0.0809	1.96	0.0311		0.0943		240
160-43195-5	SAMP	FSS-119-082421	Soil	U-233/U-234	pCi/g	0.194	0.0831	0.0846	1.96	0.0117		0.0505		240
160-43195-5	SAMP	FSS-119-082421	Soil	U-235/U-236	pCi/g	0.00	0.0055	0.0055	1.96	0.0103	U	0.0337	U	240
160-43195-5	SAMP	FSS-119-082421	Soil	U-238	pCi/g	0.223	0.0883	0.0902	1.96	0.00827		0.0435		240
160-43195-6	SAMP	FSS-120-082421	Soil	U-233/U-234	pCi/g	0.105	0.0923	0.0927	1.96	0.0322		0.117	U	240
160-43195-6	SAMP	FSS-120-082421	Soil	U-235/U-236	pCi/g	-0.0218	0.0213	0.0214	1.96	0.0400	U	0.145	U	240
160-43195-6	SAMP	FSS-120-082421	Soil	U-238	pCi/g	0.17	0.109	0.109	1.96	0.0160		0.0845		240
160-43195-7	SAMP	FSS-121-082421	Soil	U-233/U-234	pCi/g	0.197	0.0837	0.0853	1.96	0.0141		0.0548		240
160-43195-7	SAMP	FSS-121-082421	Soil	U-235/U-236	pCi/g	0.0221	0.0306	0.0306	1.96	0.0101		0.0331	U	240
160-43195-7	SAMP	FSS-121-082421	Soil	U-238	pCi/g	0.325	0.106	0.109	1.96	0.00814		0.0428		240
160-43195-8	SAMP	FSS-122-082421	Soil	U-233/U-234	pCi/g	0.19	0.0896	0.091	1.96	0.0209		0.0722		240
160-43195-8	SAMP	FSS-122-082421	Soil	U-235/U-236	pCi/g	0.0189	0.0361	0.0361	1.96	0.0164		0.0707	U	240
160-43195-8	SAMP	FSS-122-082421	Soil	U-238	pCi/g	0.172	0.0848	0.0859	1.96	0.0186		0.0676		240
160-43195-9	SAMP	FSS-123-082421	Soil	U-233/U-234	pCi/g	0.178	0.132	0.133	1.96	0.0472		0.157		240
160-43195-9	SAMP	FSS-123-082421	Soil	U-235/U-236	pCi/g	-0.00652	0.0128	0.0128	1.96	0.0240	U	0.126	U	240
160-43195-9	SAMP	FSS-123-082421	Soil	U-238	pCi/g	0.141	0.118	0.119	1.96	0.0430		0.149	U	240
LCS 160-526532/2-/	QC_LCS	LCS 160-526532/2-A	Soil	U-233/U-234	pCi/g	6.959	0.501	0.761	1.96	0.0122		0.0526		240
LCS 160-526532/2-/	QC_LCS	LCS 160-526532/2-A	Soil	U-238	pCi/g	7.155	0.508	0.778	1.96	0.0172		0.0625		240
LCS 160-528279/2-/	QC_LCS	LCS 160-528279/2-A	Soil	U-233/U-234	pCi/g	13.21	0.900	1.41	1.96	0.0328		0.113		240
LCS 160-528279/2-/	QC_LCS	LCS 160-528279/2-A	Soil	U-238	pCi/g	14.13	0.930	1.49	1.96	0.0253		0.0984		240
LCSD 160-528279/3	QC_LCSD	LCSD 160-528279/3-A	Soil	U-233/U-234	pCi/g	12.63	0.872	1.36	1.96	0.0288		0.104		240
LCSD 160-528279/3	QC_LCSD	LCSD 160-528279/3-A	Soil	U-238	pCi/g	13.04	0.885	1.39	1.96	0.0321		0.111		240
MB 160-526532/1-/	QC_BLK	MB 160-526532/1-A	Soil	U-233/U-234	pCi/g	0.01328	0.0253	0.0253	1.96	0.0115		0.0496	U	240
MB 160-526532/1-/	QC_BLK	MB 160-526532/1-A	Soil	U-235/U-236	pCi/g	0.03857	0.0439	0.044	1.96	0.0143		0.0617	U	240
MB 160-526532/1-/	QC_BLK	MB 160-526532/1-A	Soil	U-238	pCi/g	0.03093	0.0352	0.0353	1.96	0.0115		0.0495	U	240

MB 160-528279/1-A	QC_BLK	MB 160-528279/1-A	Soil	U-233/U-234	pCi/g	0.04927	0.0755	0.0756	1.96	0.0427		0.135	U	240
MB 160-528279/1-A	QC_BLK	MB 160-528279/1-A	Soil	U-235/U-236	pCi/g	0.01022	0.0425	0.0425	1.96	0.0266	U	0.114	U	240
MB 160-528279/1-A	QC_BLK	MB 160-528279/1-A	Soil	U-238	pCi/g	0.1393	0.097	0.0977	1.96	0.0213		0.0918		240
160-43195-1	SAMP	FSS-115-082421	Soil	C-14	pCi/g	-0.311	0.814	0.814	1.96	0.699	U	1.48	U	20
160-43195-10	SAMP	FSS-124-082421	Soil	C-14	pCi/g	-0.0135	0.790	0.790	1.96	0.662	U	1.41	U	20
160-43195-11	SAMP	FSS-125-082421	Soil	C-14	pCi/g	0.0341	0.597	0.597	1.96	0.496	U	1.06	U	20
160-43195-12	SAMP	FSS-126-082421	Soil	C-14	pCi/g	0.152	0.793	0.793	1.96	0.654	U	1.39	U	20
160-43195-13	SAMP	FSS-127-082421	Soil	C-14	pCi/g	0.153	0.691	0.691	1.96	0.567	U	1.21	U	20
160-43195-14	SAMP	FSS-128-082421	Soil	C-14	pCi/g	0.234	0.774	0.774	1.96	0.637	U	1.36	U	20
160-43195-15	SAMP	FSS-129-082421	Soil	C-14	pCi/g	0.183	0.657	0.657	1.96	0.539	U	1.15	U	20
160-43195-16	SAMP	FSS-130-082421	Soil	C-14	pCi/g	-0.219	0.750	0.750	1.96	0.639	U	1.36	U	20
160-43195-17	SAMP	FSS-131-082421	Soil	C-14	pCi/g	0.251	0.667	0.667	1.96	0.544	U	1.16	U	20
160-43195-18	SAMP	FSS-132-082421	Soil	C-14	pCi/g	-0.308	0.652	0.653	1.96	0.563	U	1.20	U	20
160-43195-2	SAMP	FSS-116-082421	Soil	C-14	pCi/g	-0.324	0.740	0.740	1.96	0.639	U	1.35	U	20
160-43195-22	SAMP	FSS-133-082421	Soil	C-14	pCi/g	0.807	0.784	0.789	1.96	0.614		1.31	U	20
160-43195-23	SAMP	FSS-134-082421	Soil	C-14	pCi/g	-0.195	0.748	0.749	1.96	0.638	U	1.36	U	20
160-43195-24	SAMP	FSS-135-082421	Soil	C-14	pCi/g	0.119	0.607	0.607	1.96	0.502	U	1.07	U	20
160-43195-25	SAMP	FSS-139-082421	Soil	C-14	pCi/g	0.00	0.726	0.726	1.96	0.609	U	1.29	U	20
160-43195-25 DU	QC_DUP	160-43195-25 DU	Soil	C-14	pCi/g	0.2921	0.662	0.663	1.96	0.539	U	1.14	U	20
160-43195-25 MS	QC_MS	160-43195-25 MS	Soil	C-14	pCi/g	80.08	3.01	8.99	1.96	0.693		1.47		20
160-43195-26	SAMP	FSS-140-082421	Soil	C-14	pCi/g	0.0632	0.732	0.733	1.96	0.612	U	1.30	U	20
160-43195-27	SAMP	FSS-141-082421	Soil	C-14	pCi/g	0.286	0.755	0.756	1.96	0.619	U	1.31	U	20
160-43195-28	SAMP	FSS-339-082421	Soil	C-14	pCi/g	0.265	0.592	0.592	1.96	0.482	U	1.02	U	20
160-43195-29	SAMP	FSS-340-082421	Soil	C-14	pCi/g	-0.312	0.630	0.631	1.96	0.545	U	1.15	U	20
160-43195-3	SAMP	FSS-117-082421	Soil	C-14	pCi/g	-0.131	0.828	0.828	1.96	0.703	U	1.49	U	20
160-43195-30	SAMP	FSS-341-082421	Soil	C-14	pCi/g	0.57	0.850	0.852	1.96	0.684	U	1.45	U	20
160-43195-31	SAMP	FSS-142-082421	Soil	C-14	pCi/g	0.894	0.681	0.688	1.96	0.526		1.11	U	20
160-43195-32	SAMP	FSS-143-082421	Soil	C-14	pCi/g	0.219	0.579	0.580	1.96	0.475	U	1.01	U	20
160-43195-33	SAMP	FSS-144-082421	Soil	C-14	pCi/g	0.257	0.752	0.752	1.96	0.616	U	1.31	U	20
160-43195-4	SAMP	FSS-118-082421	Soil	C-14	pCi/g	-0.125	0.638	0.638	1.96	0.543	U	1.15	U	20
160-43195-5	SAMP	FSS-119-082421	Soil	C-14	pCi/g	-0.689	0.793	0.797	1.96	0.704	U	1.49	U	20
160-43195-6	SAMP	FSS-120-082421	Soil	C-14	pCi/g	0.212	0.844	0.845	1.96	0.697	U	1.47	U	20
160-43195-7	SAMP	FSS-121-082421	Soil	C-14	pCi/g	-0.42	0.666	0.667	1.96	0.581	U	1.23	U	20
160-43195-8	SAMP	FSS-122-082421	Soil	C-14	pCi/g	-0.0135	0.838	0.838	1.96	0.705	U	1.49	U	20
160-43195-9	SAMP	FSS-123-082421	Soil	C-14	pCi/g	-0.0375	0.505	0.505	1.96	0.425	U	0.905	U	20
160-43195-9 DU	QC_DUP	160-43195-9 DU	Soil	C-14	pCi/g	0.3578	0.589	0.590	1.96	0.473	U	1.01	U	20
160-43195-9 MS	QC_MS	160-43195-9 MS	Soil	C-14	pCi/g	72.31	2.74	8.13	1.96	0.586		1.25		20
LCS 160-528500/2-A	QC_LCS	LCS 160-528500/2-A	Soil	C-14	pCi/g	77.77	2.98	8.75	1.96	0.699		1.48		20
LCS 160-528698/2-A	QC_LCS	LCS 160-528698/2-A	Soil	C-14	pCi/g	84.95	3.16	9.53	1.96	0.665		1.42		20
LCS 160-528887/2-A	QC_LCS	LCS 160-528887/2-A	Soil	C-14	pCi/g	82.33	3.04	9.23	1.96	0.688		1.46		20
MB 160-528500/1-A	QC_BLK	MB 160-528500/1-A	Soil	C-14	pCi/g	1.14	0.911	0.919	1.96	0.709		1.50	U	20
MB 160-528698/1-A	QC_BLK	MB 160-528698/1-A	Soil	C-14	pCi/g	0.09009	0.794	0.794	1.96	0.658	U	1.40	U	20
MB 160-528887/1-A	QC_BLK	MB 160-528887/1-A	Soil	C-14	pCi/g	-0.4009	0.799	0.800	1.96	0.691	U	1.46	U	20
160-43195-1	SAMP	FSS-115-082421	Soil	Cs-137	pCi/g	0.00	0.0313	0.0313	1.96	0.0357	U	0.0776	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Co-60	pCi/g	0.00621	0.0319	0.0319	1.96	0.0184	U	0.0458	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	K-40	pCi/g	4.35	0.748	0.866	1.96	0.0780		0.247		30
160-43195-1	SAMP	FSS-115-082421	Soil	Na-22	pCi/g	0.0203	0.0264	0.0265	1.96	0.0178		0.0442	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Zn-65	pCi/g	0.00	0.0158	0.0158	1.96	0.0738	U	0.163	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Ra-226	pCi/g	0.234	0.0858	0.089	1.96	0.0324		0.0754		30
160-43195-1	SAMP	FSS-115-082421	Soil	Ac-228	pCi/g	0.233	0.1	0.103	1.96	0.0765		0.176		30
160-43195-1	SAMP	FSS-115-082421	Soil	Eu-155	pCi/g	-0.00382	0.00897	0.00898	1.96	0.197	U	0.403	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Am-241	pCi/g	0.0469	0.103	0.103	1.96	0.0844	U	0.176	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Eu-152	pCi/g	-0.0445	0.079	0.0792	1.96	0.0643	U	0.135	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Bi-214	pCi/g	0.234	0.0858	0.089	1.96	0.0324		0.0754		30
160-43195-1	SAMP	FSS-115-082421	Soil	Bi-212	pCi/g	0.268	0.439	0.440	1.96	0.3408	U	0.756	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Pb-214	pCi/g	0.347	0.0785	0.086	1.96	0.0222		0.0531		30
160-43195-1	SAMP	FSS-115-082421	Soil	Pb-212	pCi/g	0.280	0.0568	0.067	1.96	0.0256		0.0570		30
160-43195-1	SAMP	FSS-115-082421	Soil	Eu-154	pCi/g	0.0438	0.071	0.0711	1.96	0.0434		0.0912	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Th-232	pCi/g	0.233	0.100	0.103	1.96	0.0765		0.176		30
160-43195-10	SAMP	FSS-124-082421	Soil	Cs-137	pCi/g	0.0240	0.0414	0.0415	1.96	0.0321	U	0.0718	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Co-60	pCi/g	-0.0479	0.020	0.0205	1.96	0.0446	U	0.100	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	K-40	pCi/g	5.26	0.974	1.11	1.96	0.273		0.658		30
160-43195-10	SAMP	FSS-124-082421	Soil	Na-22	pCi/g	0.00663	0.0274	0.0274	1.96	0.0214	U	0.0536	U	30

160-43195-10	SAMP	FSS-124-082421	Soil	Zn-65	pCi/g	0.00	0.0197	0.0197	1.96	0.104	U	0.228	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Ra-226	pCi/g	0.0589	0.0421	0.0425	1.96	0.154	U	0.321	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Ac-228	pCi/g	0.323	0.153	0.157	1.96	0.104		0.236		30
160-43195-10	SAMP	FSS-124-082421	Soil	Eu-155	pCi/g	-0.000469	0.139	0.139	1.96	0.150	U	0.311	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Am-241	pCi/g	-0.0646	0.154	0.154	1.96	0.127	U	0.263	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Eu-152	pCi/g	0.0954	0.187	0.187	1.96	0.0665		0.141	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Bi-214	pCi/g	0.0589	0.0421	0.0425	1.96	0.154	U	0.321	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Bi-212	pCi/g	0.235	0.592	0.592	1.96	0.475	U	1.04	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Pb-214	pCi/g	0.325	0.0957	0.101	1.96	0.0429		0.0968		30
160-43195-10	SAMP	FSS-124-082421	Soil	Pb-212	pCi/g	0.290	0.0736	0.0822	1.96	0.0410		0.0893		30
160-43195-10	SAMP	FSS-124-082421	Soil	Eu-154	pCi/g	0.026	0.0477	0.0477	1.96	0.0456	U	0.0966	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Th-232	pCi/g	0.323	0.153	0.157	1.96	0.104		0.236		30
160-43195-11	SAMP	FSS-125-082421	Soil	Cs-137	pCi/g	0.0971	0.0354	0.0368	1.96	0.0109		0.0279		30
160-43195-11	SAMP	FSS-125-082421	Soil	Co-60	pCi/g	-0.00483	0.00902	0.00904	1.96	0.0320	U	0.0731	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	K-40	pCi/g	5.71	0.898	1.06	1.96	0.211		0.514		30
160-43195-11	SAMP	FSS-125-082421	Soil	Na-22	pCi/g	0.0172	0.0258	0.0258	1.96	0.0179	U	0.0444	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Zn-65	pCi/g	-0.0223	0.117	0.117	1.96	0.0969	U	0.209	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Ra-226	pCi/g	0.341	0.102	0.108	1.96	0.0433		0.0973		30
160-43195-11	SAMP	FSS-125-082421	Soil	Ac-228	pCi/g	0.413	0.107	0.114	1.96	0.0247		0.0725		30
160-43195-11	SAMP	FSS-125-082421	Soil	Eu-155	pCi/g	0.0683	0.211	0.211	1.96	0.176	U	0.360	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Am-241	pCi/g	0.0311	0.102	0.102	1.96	0.0640	U	0.135	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Eu-152	pCi/g	0.0363	0.0649	0.0651	1.96	0.0542	U	0.115	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Bi-214	pCi/g	0.341	0.102	0.108	1.96	0.0433		0.0973		30
160-43195-11	SAMP	FSS-125-082421	Soil	Bi-212	pCi/g	0.342	0.653	0.654	1.96	0.525	U	1.13	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Pb-214	pCi/g	0.351	0.0774	0.0853	1.96	0.0434		0.0956		30
160-43195-11	SAMP	FSS-125-082421	Soil	Pb-212	pCi/g	0.444	0.0716	0.0911	1.96	0.0316		0.069		30
160-43195-11	SAMP	FSS-125-082421	Soil	Eu-154	pCi/g	0.0763	0.0756	0.076	1.96	0.0371		0.0786	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Th-232	pCi/g	0.413	0.107	0.114	1.96	0.0247		0.0725		30
160-43195-12	SAMP	FSS-126-082421	Soil	Cs-137	pCi/g	0.0308	0.0566	0.0567	1.96	0.0445	U	0.0982	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Co-60	pCi/g	0.00947	0.0083	0.00835	1.96	0.0271	U	0.0675	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	K-40	pCi/g	6.11	1.08	1.23	1.96	0.115		0.363		30
160-43195-12	SAMP	FSS-126-082421	Soil	Na-22	pCi/g	-0.0063	0.0454	0.0454	1.96	0.0371	U	0.0869	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Zn-65	pCi/g	0.00	0.0619	0.0619	1.96	0.113	U	0.249	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Ra-226	pCi/g	0.436	0.115	0.123	1.96	0.0439		0.104		30
160-43195-12	SAMP	FSS-126-082421	Soil	Ac-228	pCi/g	0.567	0.161	0.171	1.96	0.0296		0.0936		30
160-43195-12	SAMP	FSS-126-082421	Soil	Eu-155	pCi/g	0.0337	0.101	0.101	1.96	0.256	U	0.525	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Am-241	pCi/g	-0.0725	0.191	0.191	1.96	0.158	U	0.326	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Eu-152	pCi/g	0.292	0.0947	0.0993	1.96	0.0838		0.177		30
160-43195-12	SAMP	FSS-126-082421	Soil	Bi-214	pCi/g	0.436	0.115	0.123	1.96	0.0439		0.104		30
160-43195-12	SAMP	FSS-126-082421	Soil	Bi-212	pCi/g	0.446	0.868	0.869	1.96	0.6943	U	1.50	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Pb-214	pCi/g	0.102	0.0713	0.072	1.96	0.115	U	0.242	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Pb-212	pCi/g	0.550	0.0928	0.109	1.96	0.0361		0.0807		30
160-43195-12	SAMP	FSS-126-082421	Soil	Eu-154	pCi/g	0.202	0.0955	0.0977	1.96	0.0632		0.133		30
160-43195-12	SAMP	FSS-126-082421	Soil	Th-232	pCi/g	0.567	0.161	0.171	1.96	0.0296		0.0936		30
160-43195-13	SAMP	FSS-127-082421	Soil	Cs-137	pCi/g	0.0254	0.0587	0.0588	1.96	0.0479	U	0.101	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Co-60	pCi/g	0.00963	0.0259	0.026	1.96	0.0171	U	0.0425	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	K-40	pCi/g	3.85	0.678	0.781	1.96	0.0724		0.229		30
160-43195-13	SAMP	FSS-127-082421	Soil	Na-22	pCi/g	-0.00396	0.0286	0.0286	1.96	0.0233	U	0.0547	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Zn-65	pCi/g	0.00321	0.0899	0.0899	1.96	0.0753	U	0.165	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Ra-226	pCi/g	0.289	0.0771	0.0826	1.96	0.0235		0.0569		30
160-43195-13	SAMP	FSS-127-082421	Soil	Ac-228	pCi/g	0.213	0.110	0.112	1.96	0.0410		0.103		30
160-43195-13	SAMP	FSS-127-082421	Soil	Eu-155	pCi/g	0.0561	0.170	0.170	1.96	0.141	U	0.29	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Am-241	pCi/g	0.0478	0.101	0.102	1.96	0.0833	U	0.173	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Eu-152	pCi/g	0.0802	0.118	0.118	1.96	0.0561		0.118	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Bi-214	pCi/g	0.289	0.0771	0.0826	1.96	0.0235		0.0569		30
160-43195-13	SAMP	FSS-127-082421	Soil	Bi-212	pCi/g	0.00848	0.461	0.461	1.96	0.3871	U	0.843	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Pb-214	pCi/g	0.279	0.0837	0.0884	1.96	0.0518		0.112		30
160-43195-13	SAMP	FSS-127-082421	Soil	Pb-212	pCi/g	0.326	0.0668	0.0786	1.96	0.0270		0.0594		30
160-43195-13	SAMP	FSS-127-082421	Soil	Eu-154	pCi/g	0.0653	0.0759	0.0762	1.96	0.0338		0.0718	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Th-232	pCi/g	0.213	0.110	0.112	1.96	0.0410		0.103		30
160-43195-14	SAMP	FSS-128-082421	Soil	Cs-137	pCi/g	0.0797	0.029	0.0301	1.96	0.0064		0.0202		30
160-43195-14	SAMP	FSS-128-082421	Soil	Co-60	pCi/g	0.0213	0.0453	0.0453	1.96	0.0220	U	0.0549	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	K-40	pCi/g	3.57	0.809	0.885	1.96	0.2640		0.637		30

160-43195-14	SAMP	FSS-128-082421	Soil	Na-22	pCi/g	0.0103	0.0275	0.0276	1.96	0.0207	U	0.0519	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Zn-65	pCi/g	0.00	0.0134	0.0134	1.96	0.0875	U	0.194	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Ra-226	pCi/g	0.263	0.111	0.114	1.96	0.0522		0.117		30
160-43195-14	SAMP	FSS-128-082421	Soil	Ac-228	pCi/g	0.183	0.192	0.193	1.96	0.113		0.253	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Eu-155	pCi/g	0.0542	0.109	0.109	1.96	0.146	U	0.303	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Am-241	pCi/g	-0.0585	0.167	0.167	1.96	0.139	U	0.286	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Eu-152	pCi/g	0.0494	0.103	0.103	1.96	0.0705	U	0.149	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Bi-214	pCi/g	0.263	0.111	0.114	1.96	0.0522		0.117		30
160-43195-14	SAMP	FSS-128-082421	Soil	Bi-212	pCi/g	-0.0333	0.557	0.557	1.96	0.465	U	1.02	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Pb-214	pCi/g	0.324	0.0952	0.101	1.96	0.0441		0.0989		30
160-43195-14	SAMP	FSS-128-082421	Soil	Pb-212	pCi/g	0.299	0.0760	0.0849	1.96	0.0441		0.0952		30
160-43195-14	SAMP	FSS-128-082421	Soil	Eu-154	pCi/g	0.0407	0.0711	0.0712	1.96	0.0493	U	0.104	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Th-232	pCi/g	0.183	0.192	0.193	1.96	0.113		0.253	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Cs-137	pCi/g	0.0334	0.0621	0.0622	1.96	0.0493	U	0.107	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Co-60	pCi/g	0.00	0.0180	0.0180	1.96	0.0107	U	0.0339	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	K-40	pCi/g	4.36	0.881	0.980	1.96	0.108		0.342		30
160-43195-15	SAMP	FSS-129-082421	Soil	Na-22	pCi/g	-0.0148	0.0444	0.0445	1.96	0.0349	U	0.0818	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Zn-65	pCi/g	0.0514	0.0969	0.097	1.96	0.0743	U	0.170	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Ra-226	pCi/g	0.126	0.0663	0.0674	1.96	0.126		0.267	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Ac-228	pCi/g	0.325	0.178	0.181	1.96	0.0881		0.208		30
160-43195-15	SAMP	FSS-129-082421	Soil	Eu-155	pCi/g	-0.0929	0.316	0.316	1.96	0.263	U	0.538	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Am-241	pCi/g	0.0654	0.155	0.155	1.96	0.128	U	0.265	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Eu-152	pCi/g	0.0915	0.148	0.148	1.96	0.0807		0.170	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Bi-214	pCi/g	0.126	0.0663	0.0674	1.96	0.126		0.267	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Bi-212	pCi/g	0.297	0.535	0.536	1.96	0.413	U	0.932	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Pb-214	pCi/g	0.264	0.0986	0.102	1.96	0.0604		0.133		30
160-43195-15	SAMP	FSS-129-082421	Soil	Pb-212	pCi/g	0.316	0.0770	0.0836	1.96	0.0397		0.0875		30
160-43195-15	SAMP	FSS-129-082421	Soil	Eu-154	pCi/g	0.100	0.0928	0.0934	1.96	0.0493		0.105	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Th-232	pCi/g	0.325	0.178	0.181	1.96	0.0881		0.208		30
160-43195-16	SAMP	FSS-130-082421	Soil	Cs-137	pCi/g	0.00	0.0138	0.0138	1.96	0.0294	U	0.0649	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Co-60	pCi/g	-0.0535	0.0842	0.0844	1.96	0.0406	U	0.0901	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	K-40	pCi/g	3.93	0.706	0.809	1.96	0.0770		0.243		30
160-43195-16	SAMP	FSS-130-082421	Soil	Na-22	pCi/g	-0.0137	0.0322	0.0322	1.96	0.0248	U	0.0582	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Zn-65	pCi/g	0.00	0.027	0.027	1.96	0.0897	U	0.195	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Ra-226	pCi/g	0.0960	0.104	0.104	1.96	0.0791		0.169	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Ac-228	pCi/g	0.251	0.185	0.186	1.96	0.0872		0.197		30
160-43195-16	SAMP	FSS-130-082421	Soil	Eu-155	pCi/g	-0.0726	0.235	0.235	1.96	0.196	U	0.400	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Am-241	pCi/g	-0.0566	0.124	0.124	1.96	0.102	U	0.211	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Eu-152	pCi/g	0.0537	0.0965	0.0966	1.96	0.0556	U	0.117	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Bi-214	pCi/g	0.0960	0.104	0.104	1.96	0.0791		0.169	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Bi-212	pCi/g	0.305	0.494	0.495	1.96	0.387	U	0.848	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Pb-214	pCi/g	0.363	0.0658	0.0755	1.96	0.0263		0.0612		30
160-43195-16	SAMP	FSS-130-082421	Soil	Pb-212	pCi/g	0.395	0.0636	0.0810	1.96	0.0245		0.0547		30
160-43195-16	SAMP	FSS-130-082421	Soil	Eu-154	pCi/g	-0.0326	0.0545	0.0546	1.96	0.0443	U	0.0929	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Th-232	pCi/g	0.251	0.185	0.186	1.96	0.0872		0.197		30
160-43195-17	SAMP	FSS-131-082421	Soil	Cs-137	pCi/g	0.0219	0.0446	0.0446	1.96	0.0349	U	0.0783	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Co-60	pCi/g	-0.00297	0.0543	0.0543	1.96	0.0255	U	0.0636	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	K-40	pCi/g	4.79	0.997	1.11	1.96	0.306		0.738		30
160-43195-17	SAMP	FSS-131-082421	Soil	Na-22	pCi/g	0.0164	0.0331	0.0331	1.96	0.0240	U	0.0601	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Zn-65	pCi/g	0.00	0.0312	0.0312	1.96	0.101	U	0.224	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Ra-226	pCi/g	0.313	0.110	0.114	1.96	0.0508		0.117		30
160-43195-17	SAMP	FSS-131-082421	Soil	Ac-228	pCi/g	0.365	0.258	0.2600	1.96	0.131		0.294		30
160-43195-17	SAMP	FSS-131-082421	Soil	Eu-155	pCi/g	0.0337	0.0958	0.0958	1.96	0.208	U	0.429	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Am-241	pCi/g	0.0258	0.167	0.167	1.96	0.140	U	0.289	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Eu-152	pCi/g	0.0652	0.0370	0.0376	1.96	0.0867	U	0.182	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Bi-214	pCi/g	0.313	0.110	0.114	1.96	0.0508		0.117		30
160-43195-17	SAMP	FSS-131-082421	Soil	Bi-212	pCi/g	0.337	0.686	0.687	1.96	0.5452	U	1.19	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Pb-214	pCi/g	0.356	0.103	0.109	1.96	0.0511		0.115		30
160-43195-17	SAMP	FSS-131-082421	Soil	Pb-212	pCi/g	0.365	0.0835	0.0954	1.96	0.0436		0.0954		30
160-43195-17	SAMP	FSS-131-082421	Soil	Eu-154	pCi/g	0.0378	0.0739	0.0740	1.96	0.0623	U	0.131	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Th-232	pCi/g	0.365	0.258	0.260	1.96	0.131		0.294		30
160-43195-18	SAMP	FSS-132-082421	Soil	Cs-137	pCi/g	0.0476	0.0290	0.0294	1.96	0.0128		0.0321		30
160-43195-18	SAMP	FSS-132-082421	Soil	Co-60	pCi/g	0.0131	0.0279	0.0279	1.96	0.0196	U	0.0488	U	30

160-43195-18	SAMP	FSS-132-082421	Soil	K-40	pCi/g	3.84	0.776	0.866	1.96	0.224		0.545		30
160-43195-18	SAMP	FSS-132-082421	Soil	Na-22	pCi/g	-0.0295	0.0491	0.0492	1.96	0.0378	U	0.0849	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Zn-65	pCi/g	0.00	0.0168	0.0168	1.96	0.0903	U	0.197	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Ra-226	pCi/g	0.417	0.103	0.112	1.96	0.0379		0.0872		30
160-43195-18	SAMP	FSS-132-082421	Soil	Ac-228	pCi/g	0.0584	0.107	0.108	1.96	0.178	U	0.380	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Eu-155	pCi/g	-0.00455	0.0102	0.0102	1.96	0.188	U	0.385	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Am-241	pCi/g	-0.0635	0.130	0.130	1.96	0.0807	U	0.169	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Eu-152	pCi/g	-0.00893	0.0159	0.0159	1.96	0.0721	U	0.151	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Bi-214	pCi/g	0.417	0.103	0.112	1.96	0.0379		0.0872		30
160-43195-18	SAMP	FSS-132-082421	Soil	Bi-212	pCi/g	0.363	0.667	0.668	1.96	0.5347	U	1.15	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Pb-214	pCi/g	0.367	0.0955	0.103	1.96	0.0390		0.0873		30
160-43195-18	SAMP	FSS-132-082421	Soil	Pb-212	pCi/g	0.349	0.0681	0.0812	1.96	0.0330		0.0722		30
160-43195-18	SAMP	FSS-132-082421	Soil	Eu-154	pCi/g	0.0820	0.0689	0.0694	1.96	0.0343		0.0732		30
160-43195-18	SAMP	FSS-132-082421	Soil	Th-232	pCi/g	0.0584	0.107	0.108	1.96	0.178	U	0.380	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Cs-137	pCi/g	0.0149	0.0432	0.0432	1.96	0.0346	U	0.0774	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Co-60	pCi/g	-0.0132	0.0921	0.0921	1.96	0.0341	U	0.0802	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	K-40	pCi/g	4.05	0.906	0.993	1.96	0.293		0.706		30
160-43195-2	SAMP	FSS-116-082421	Soil	Na-22	pCi/g	0.0242	0.0338	0.0339	1.96	0.0230		0.0575	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Zn-65	pCi/g	0.00	0.0149	0.0149	1.96	0.109	U	0.239	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Ra-226	pCi/g	0.475	0.109	0.12	1.96	0.0381		0.0905		30
160-43195-2	SAMP	FSS-116-082421	Soil	Ac-228	pCi/g	0.428	0.138	0.145	1.96	0.0503		0.131		30
160-43195-2	SAMP	FSS-116-082421	Soil	Eu-155	pCi/g	0.0257	0.0857	0.0857	1.96	0.160	U	0.332	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Am-241	pCi/g	0.0306	0.163	0.163	1.96	0.136	U	0.282	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Eu-152	pCi/g	0.0755	0.134	0.134	1.96	0.0782	U	0.165	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Bi-214	pCi/g	0.475	0.109	0.12	1.96	0.0381		0.0905		30
160-43195-2	SAMP	FSS-116-082421	Soil	Bi-212	pCi/g	-0.0246	0.560	0.560	1.96	0.4683	U	1.04	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Pb-214	pCi/g	0.379	0.114	0.121	1.96	0.0580		0.128		30
160-43195-2	SAMP	FSS-116-082421	Soil	Pb-212	pCi/g	0.298	0.085	0.093	1.96	0.0523		0.112		30
160-43195-2	SAMP	FSS-116-082421	Soil	Eu-154	pCi/g	0.0282	0.0432	0.0433	1.96	0.0576	U	0.121	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Th-232	pCi/g	0.428	0.138	0.145	1.96	0.0503		0.131		30
160-43195-22	SAMP	FSS-133-082421	Soil	Cs-137	pCi/g	0.00231	0.0582	0.0582	1.96	0.0487	U	0.107	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Co-60	pCi/g	0.0354	0.0209	0.0212	1.96	0.0274		0.0683	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	K-40	pCi/g	6.78	1.14	1.32	1.96	0.116		0.367		30
160-43195-22	SAMP	FSS-133-082421	Soil	Na-22	pCi/g	-0.0271	0.0669	0.067	1.96	0.0530	U	0.119	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Zn-65	pCi/g	0.00	0.0473	0.0473	1.96	0.129	U	0.281	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Ra-226	pCi/g	0.640	0.135	0.149	1.96	0.0444		0.105		30
160-43195-22	SAMP	FSS-133-082421	Soil	Ac-228	pCi/g	0.759	0.195	0.209	1.96	0.0635		0.162		30
160-43195-22	SAMP	FSS-133-082421	Soil	Eu-155	pCi/g	0.0821	0.183	0.183	1.96	0.2807	U	0.574	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Am-241	pCi/g	-0.0878	0.211	0.211	1.96	0.175	U	0.360	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Eu-152	pCi/g	0.0997	0.196	0.196	1.96	0.0970		0.204	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Bi-214	pCi/g	0.64	0.135	0.149	1.96	0.0444		0.105		30
160-43195-22	SAMP	FSS-133-082421	Soil	Bi-212	pCi/g	0.00	0.593	0.593	1.96	0.403	U	0.919	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Pb-214	pCi/g	0.685	0.136	0.152	1.96	0.0610		0.135		30
160-43195-22	SAMP	FSS-133-082421	Soil	Pb-212	pCi/g	0.853	0.120	0.149	1.96	0.0526		0.114		30
160-43195-22	SAMP	FSS-133-082421	Soil	Eu-154	pCi/g	0.0779	0.129	0.130	1.96	0.0661		0.139	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Th-232	pCi/g	0.759	0.195	0.209	1.96	0.0635		0.162		30
160-43195-23	SAMP	FSS-134-082421	Soil	Cs-137	pCi/g	0.0266	0.0471	0.0471	1.96	0.0365	U	0.0816	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Co-60	pCi/g	-0.0231	0.0846	0.0846	1.96	0.0430	U	0.0984	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	K-40	pCi/g	4.48	0.964	1.06	1.96	0.295		0.716		30
160-43195-23	SAMP	FSS-134-082421	Soil	Na-22	pCi/g	-0.0119	0.0428	0.0428	1.96	0.0339	U	0.0799	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Zn-65	pCi/g	0.0289	0.133	0.133	1.96	0.108	U	0.238	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Ra-226	pCi/g	0.355	0.117	0.123	1.96	0.0480		0.111		30
160-43195-23	SAMP	FSS-134-082421	Soil	Ac-228	pCi/g	0.633	0.180	0.191	1.96	0.0598		0.152		30
160-43195-23	SAMP	FSS-134-082421	Soil	Eu-155	pCi/g	-0.0779	0.131	0.132	1.96	0.166	U	0.344	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Am-241	pCi/g	-0.0749	0.181	0.182	1.96	0.150	U	0.31	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Eu-152	pCi/g	0.150	0.0714	0.0731	1.96	0.0745		0.158	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Bi-214	pCi/g	0.355	0.117	0.123	1.96	0.0480		0.111		30
160-43195-23	SAMP	FSS-134-082421	Soil	Bi-212	pCi/g	0.337	0.550	0.551	1.96	0.423	U	0.950	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Pb-214	pCi/g	0.350	0.104	0.110	1.96	0.0388		0.0900		30
160-43195-23	SAMP	FSS-134-082421	Soil	Pb-212	pCi/g	0.375	0.0800	0.093	1.96	0.0376		0.0834		30
160-43195-23	SAMP	FSS-134-082421	Soil	Eu-154	pCi/g	0.0484	0.0533	0.0536	1.96	0.0590	U	0.124	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Th-232	pCi/g	0.633	0.180	0.191	1.96	0.0598		0.152		30
160-43195-24	SAMP	FSS-135-082421	Soil	Cs-137	pCi/g	-0.0204	0.0537	0.0538	1.96	0.0433	U	0.0947	U	30

160-43195-24	SAMP	FSS-135-082421	Soil	Co-60	pCi/g	0.0295	0.0163	0.0165	1.96	0.0251		0.0620	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	K-40	pCi/g	4.05	0.894	0.982	1.96	0.2882		0.695		30
160-43195-24	SAMP	FSS-135-082421	Soil	Na-22	pCi/g	0.0153	0.0421	0.0421	1.96	0.0328	U	0.0769	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Zn-65	pCi/g	0.0813	0.130	0.130	1.96	0.101	U	0.223	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Ra-226	pCi/g	0.218	0.0954	0.0979	1.96	0.0583		0.131		30
160-43195-24	SAMP	FSS-135-082421	Soil	Ac-228	pCi/g	0.361	0.185	0.189	1.96	0.0851		0.200		30
160-43195-24	SAMP	FSS-135-082421	Soil	Eu-155	pCi/g	0.0294	0.0829	0.083	1.96	0.148	U	0.308	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Am-241	pCi/g	-0.0491	0.134	0.134	1.96	0.0877	U	0.184	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Eu-152	pCi/g	0.181	0.105	0.107	1.96	0.0675		0.143		30
160-43195-24	SAMP	FSS-135-082421	Soil	Bi-214	pCi/g	0.218	0.0954	0.0979	1.96	0.0583		0.131		30
160-43195-24	SAMP	FSS-135-082421	Soil	Bi-212	pCi/g	0.324	0.526	0.527	1.96	0.4048	U	0.907	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Pb-214	pCi/g	0.284	0.0921	0.0966	1.96	0.0508		0.113		30
160-43195-24	SAMP	FSS-135-082421	Soil	Pb-212	pCi/g	0.312	0.0721	0.0822	1.96	0.0347		0.0771		30
160-43195-24	SAMP	FSS-135-082421	Soil	Eu-154	pCi/g	-0.00377	0.0528	0.0528	1.96	0.0441	U	0.0938	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Th-232	pCi/g	0.361	0.185	0.189	1.96	0.0851		0.2		30
160-43195-25	SAMP	FSS-139-082421	Soil	Cs-137	pCi/g	0.0349	0.0608	0.0609	1.96	0.0479	U	0.105	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Co-60	pCi/g	-0.00336	0.00776	0.00777	1.96	0.0376	U	0.0883	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	K-40	pCi/g	4.01	0.863	0.950	1.96	0.113		0.356		30
160-43195-25	SAMP	FSS-139-082421	Soil	Na-22	pCi/g	0.0294	0.0382	0.0383	1.96	0.0257		0.064	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Zn-65	pCi/g	0.0536	0.107	0.107	1.96	0.0830	U	0.188	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Ra-226	pCi/g	0.432	0.126	0.133	1.96	0.0516		0.119		30
160-43195-25	SAMP	FSS-139-082421	Soil	Ac-228	pCi/g	0.545	0.130	0.141	1.96	0.0290		0.0919		30
160-43195-25	SAMP	FSS-139-082421	Soil	Eu-155	pCi/g	-0.0930	0.325	0.325	1.96	0.271	U	0.554	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Am-241	pCi/g	-0.0802	0.173	0.174	1.96	0.143	U	0.296	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Eu-152	pCi/g	0.0974	0.163	0.163	1.96	0.0861		0.182	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Bi-214	pCi/g	0.432	0.126	0.133	1.96	0.0516		0.119		30
160-43195-25	SAMP	FSS-139-082421	Soil	Bi-212	pCi/g	0.251	0.883	0.883	1.96	0.723	U	1.56	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Pb-214	pCi/g	0.404	0.0955	0.104	1.96	0.0510		0.115		30
160-43195-25	SAMP	FSS-139-082421	Soil	Pb-212	pCi/g	0.554	0.0965	0.112	1.96	0.0431		0.0946		30
160-43195-25	SAMP	FSS-139-082421	Soil	Eu-154	pCi/g	0.0615	0.107	0.108	1.96	0.0571		0.121	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Th-232	pCi/g	0.545	0.130	0.141	1.96	0.0290		0.0919		30
160-43195-26	SAMP	FSS-140-082421	Soil	Cs-137	pCi/g	0.0293	0.0463	0.0464	1.96	0.0366	U	0.0792	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Co-60	pCi/g	-0.0471	0.0745	0.0747	1.96	0.0357	U	0.0802	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	K-40	pCi/g	3.35	0.646	0.728	1.96	0.0757		0.240		30
160-43195-26	SAMP	FSS-140-082421	Soil	Na-22	pCi/g	0.0135	0.0241	0.0242	1.96	0.0173	U	0.0429	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Zn-65	pCi/g	0.00	0.0265	0.0265	1.96	0.0656	U	0.146	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Ra-226	pCi/g	0.252	0.0891	0.0927	1.96	0.0397		0.0897		30
160-43195-26	SAMP	FSS-140-082421	Soil	Ac-228	pCi/g	0.519	0.128	0.138	1.96	0.0192		0.0607		30
160-43195-26	SAMP	FSS-140-082421	Soil	Eu-155	pCi/g	0.0553	0.103	0.103	1.96	0.0839	U	0.176	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Am-241	pCi/g	0.00865	0.111	0.111	1.96	0.0932	U	0.193	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Eu-152	pCi/g	0.0776	0.163	0.163	1.96	0.126	U	0.263	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Bi-214	pCi/g	0.252	0.0891	0.0927	1.96	0.0397		0.0897		30
160-43195-26	SAMP	FSS-140-082421	Soil	Bi-212	pCi/g	0.398	0.710	0.711	1.96	0.572	U	1.22	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Pb-214	pCi/g	0.304	0.0692	0.0758	1.96	0.0392		0.0868		30
160-43195-26	SAMP	FSS-140-082421	Soil	Pb-212	pCi/g	0.335	0.0589	0.0726	1.96	0.0237		0.0531		30
160-43195-26	SAMP	FSS-140-082421	Soil	Eu-154	pCi/g	0.0102	0.0479	0.0479	1.96	0.0397	U	0.0837	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Th-232	pCi/g	0.519	0.128	0.138	1.96	0.0192		0.0607		30
160-43195-27	SAMP	FSS-141-082421	Soil	Cs-137	pCi/g	0.00343	0.0454	0.0454	1.96	0.0378	U	0.0831	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Co-60	pCi/g	0.0279	0.0207	0.0209	1.96	0.0093		0.0294	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	K-40	pCi/g	2.58	0.816	0.856	1.96	0.335		0.778		30
160-43195-27	SAMP	FSS-141-082421	Soil	Na-22	pCi/g	-0.0219	0.0393	0.0393	1.96	0.0294	U	0.0692	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Zn-65	pCi/g	-0.0716	0.127	0.127	1.96	0.109	U	0.237	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Ra-226	pCi/g	0.293	0.0890	0.0939	1.96	0.0356		0.0842		30
160-43195-27	SAMP	FSS-141-082421	Soil	Ac-228	pCi/g	0.317	0.146	0.150	1.96	0.0732		0.174		30
160-43195-27	SAMP	FSS-141-082421	Soil	Eu-155	pCi/g	0.0607	0.187	0.187	1.96	0.155	U	0.320	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Am-241	pCi/g	0.0244	0.141	0.141	1.96	0.117	U	0.243	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Eu-152	pCi/g	0.0111	0.0226	0.0227	1.96	0.0666	U	0.141	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Bi-214	pCi/g	0.293	0.089	0.0939	1.96	0.0356		0.0842		30
160-43195-27	SAMP	FSS-141-082421	Soil	Bi-212	pCi/g	-0.0663	0.603	0.603	1.96	0.5013	U	1.09	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Pb-214	pCi/g	0.261	0.0709	0.0757	1.96	0.0225		0.0558		30
160-43195-27	SAMP	FSS-141-082421	Soil	Pb-212	pCi/g	0.255	0.0664	0.0739	1.96	0.0358		0.0787		30
160-43195-27	SAMP	FSS-141-082421	Soil	Eu-154	pCi/g	0.0421	0.088	0.0881	1.96	0.0542	U	0.114	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Th-232	pCi/g	0.317	0.146	0.150	1.96	0.0732		0.174		30

160-43195-28	SAMP	FSS-339-082421	Soil	Cs-137	pCi/g	-0.0367	0.0618	0.0619	1.96	0.0494	U	0.106	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Co-60	pCi/g	-0.0134	0.101	0.101	1.96	0.0370	U	0.0843	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	K-40	pCi/g	5.31	0.934	1.07	1.96	0.253		0.609		30
160-43195-28	SAMP	FSS-339-082421	Soil	Na-22	pCi/g	0.00977	0.0361	0.0362	1.96	0.0287	U	0.0674	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Zn-65	pCi/g	-0.0935	0.152	0.152	1.96	0.121	U	0.259	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Ra-226	pCi/g	0.423	0.101	0.110	1.96	0.0332		0.0787		30
160-43195-28	SAMP	FSS-339-082421	Soil	Ac-228	pCi/g	0.447	0.122	0.130	1.96	0.0561		0.139		30
160-43195-28	SAMP	FSS-339-082421	Soil	Eu-155	pCi/g	-0.0602	0.170	0.170	1.96	0.141	U	0.291	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Am-241	pCi/g	0.00977	0.120	0.120	1.96	0.0798	U	0.168	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Eu-152	pCi/g	0.215	0.0792	0.0822	1.96	0.0762		0.159		30
160-43195-28	SAMP	FSS-339-082421	Soil	Bi-214	pCi/g	0.423	0.101	0.110	1.96	0.0332		0.0787		30
160-43195-28	SAMP	FSS-339-082421	Soil	Bi-212	pCi/g	-0.190	0.685	0.685	1.96	0.561	U	1.21	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Pb-214	pCi/g	0.350	0.110	0.115	1.96	0.0501		0.110		30
160-43195-28	SAMP	FSS-339-082421	Soil	Pb-212	pCi/g	0.536	0.0819	0.106	1.96	0.0327		0.0722		30
160-43195-28	SAMP	FSS-339-082421	Soil	Eu-154	pCi/g	0.0844	0.0927	0.0931	1.96	0.0429		0.0906	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Th-232	pCi/g	0.447	0.122	0.130	1.96	0.0561		0.139		30
160-43195-29	SAMP	FSS-340-082421	Soil	Cs-137	pCi/g	0.00324	0.0449	0.0449	1.96	0.0374	U	0.0815	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Co-60	pCi/g	0.0250	0.0185	0.0187	1.96	0.0083		0.0263	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	K-40	pCi/g	3.81	0.785	0.873	1.96	0.241		0.579		30
160-43195-29	SAMP	FSS-340-082421	Soil	Na-22	pCi/g	-0.0172	0.0422	0.0422	1.96	0.0331	U	0.0756	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Zn-65	pCi/g	-0.0525	0.134	0.134	1.96	0.108	U	0.233	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Ra-226	pCi/g	0.389	0.0966	0.104	1.96	0.0451		0.102		30
160-43195-29	SAMP	FSS-340-082421	Soil	Ac-228	pCi/g	0.469	0.117	0.126	1.96	0.0212		0.0672		30
160-43195-29	SAMP	FSS-340-082421	Soil	Eu-155	pCi/g	-0.000827	0.134	0.134	1.96	0.181	U	0.371	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Am-241	pCi/g	0.107	0.115	0.116	1.96	0.0922		0.192	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Eu-152	pCi/g	-0.0371	0.0844	0.0845	1.96	0.0692	U	0.145	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Bi-214	pCi/g	0.389	0.0966	0.104	1.96	0.0451		0.102		30
160-43195-29	SAMP	FSS-340-082421	Soil	Bi-212	pCi/g	0.609	0.396	0.401	1.96	0.173		0.425		30
160-43195-29	SAMP	FSS-340-082421	Soil	Pb-214	pCi/g	0.457	0.0866	0.0983	1.96	0.0421		0.0937		30
160-43195-29	SAMP	FSS-340-082421	Soil	Pb-212	pCi/g	0.369	0.0673	0.0820	1.96	0.0297		0.0657		30
160-43195-29	SAMP	FSS-340-082421	Soil	Eu-154	pCi/g	0.0601	0.0759	0.0762	1.96	0.0396		0.084	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Th-232	pCi/g	0.469	0.117	0.126	1.96	0.0212		0.0672		30
160-43195-3	SAMP	FSS-117-082421	Soil	Cs-137	pCi/g	0.0831	0.0317	0.0329	1.96	0.0097		0.0258		30
160-43195-3	SAMP	FSS-117-082421	Soil	Co-60	pCi/g	0.0192	0.0168	0.0169	1.96	0.0081		0.0257	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	K-40	pCi/g	4.61	0.835	0.954	1.96	0.221		0.538		30
160-43195-3	SAMP	FSS-117-082421	Soil	Na-22	pCi/g	-0.0382	0.0545	0.0546	1.96	0.0418	U	0.0927	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Zn-65	pCi/g	-0.0859	0.149	0.149	1.96	0.119	U	0.255	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Ra-226	pCi/g	0.522	0.112	0.124	1.96	0.0414		0.094		30
160-43195-3	SAMP	FSS-117-082421	Soil	Ac-228	pCi/g	0.678	0.142	0.157	1.96	0.0259		0.0759		30
160-43195-3	SAMP	FSS-117-082421	Soil	Eu-155	pCi/g	0.0300	0.101	0.101	1.96	0.205	U	0.418	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Am-241	pCi/g	-0.014	0.139	0.139	1.96	0.117	U	0.241	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Eu-152	pCi/g	0.0781	0.193	0.194	1.96	0.0712		0.149	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Bi-214	pCi/g	0.522	0.112	0.124	1.96	0.0414		0.0940		30
160-43195-3	SAMP	FSS-117-082421	Soil	Bi-212	pCi/g	0.393	0.670	0.671	1.96	0.535	U	1.15	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Pb-214	pCi/g	0.425	0.0874	0.0975	1.96	0.0391		0.0873		30
160-43195-3	SAMP	FSS-117-082421	Soil	Pb-212	pCi/g	0.584	0.0826	0.111	1.96	0.0348		0.0757		30
160-43195-3	SAMP	FSS-117-082421	Soil	Eu-154	pCi/g	0.0247	0.0306	0.0307	1.96	0.0512	U	0.107	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Th-232	pCi/g	0.678	0.142	0.157	1.96	0.0259		0.0759		30
160-43195-30	SAMP	FSS-341-082421	Soil	Cs-137	pCi/g	-0.00447	0.0601	0.0601	1.96	0.0501	U	0.110	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Co-60	pCi/g	0.0190	0.0141	0.0142	1.96	0.0275	U	0.0684	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	K-40	pCi/g	4.34	0.912	1.01	1.96	0.116		0.368		30
160-43195-30	SAMP	FSS-341-082421	Soil	Na-22	pCi/g	0.0575	0.0325	0.033	1.96	0.0112		0.0353		30
160-43195-30	SAMP	FSS-341-082421	Soil	Zn-65	pCi/g	0.0330	0.136	0.136	1.96	0.111	U	0.246	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Ra-226	pCi/g	0.431	0.131	0.138	1.96	0.0542		0.125		30
160-43195-30	SAMP	FSS-341-082421	Soil	Ac-228	pCi/g	0.589	0.167	0.177	1.96	0.0300		0.0948		30
160-43195-30	SAMP	FSS-341-082421	Soil	Eu-155	pCi/g	0.0340	0.0975	0.0975	1.96	0.254	U	0.521	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Am-241	pCi/g	-0.0683	0.167	0.167	1.96	0.138	U	0.286	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Eu-152	pCi/g	0.117	0.120	0.121	1.96	0.0945		0.199	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Bi-214	pCi/g	0.431	0.131	0.138	1.96	0.0542		0.125		30
160-43195-30	SAMP	FSS-341-082421	Soil	Bi-212	pCi/g	-0.035	0.757	0.757	1.96	0.633	U	1.38	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Pb-214	pCi/g	0.410	0.101	0.109	1.96	0.0626		0.139		30
160-43195-30	SAMP	FSS-341-082421	Soil	Pb-212	pCi/g	0.388	0.0891	0.0976	1.96	0.0466		0.102		30
160-43195-30	SAMP	FSS-341-082421	Soil	Eu-154	pCi/g	0.0669	0.122	0.122	1.96	0.0677	U	0.142	U	30

160-43195-30	SAMP	FSS-341-082421	Soil	Th-232	pCi/g	0.589	0.167	0.177	1.96	0.0300		0.0948		30
160-43195-31	SAMP	FSS-142-082421	Soil	Cs-137	pCi/g	0.0949	0.0284	0.0300	1.96	0.0051		0.0163		30
160-43195-31	SAMP	FSS-142-082421	Soil	Co-60	pCi/g	-0.0108	0.0514	0.0514	1.96	0.0254	U	0.0596	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	K-40	pCi/g	3.66	0.677	0.77	1.96	0.0761		0.241		30
160-43195-31	SAMP	FSS-142-082421	Soil	Na-22	pCi/g	0.00834	0.0308	0.0308	1.96	0.0245	U	0.0575	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Zn-65	pCi/g	0.00843	0.106	0.106	1.96	0.0882	U	0.192	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Ra-226	pCi/g	0.329	0.0909	0.0969	1.96	0.0382		0.0867		30
160-43195-31	SAMP	FSS-142-082421	Soil	Ac-228	pCi/g	0.414	0.161	0.166	1.96	0.0610		0.144		30
160-43195-31	SAMP	FSS-142-082421	Soil	Eu-155	pCi/g	-0.00441	0.00964	0.00965	1.96	0.181	U	0.371	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Am-241	pCi/g	-0.0686	0.149	0.150	1.96	0.124	U	0.254	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Eu-152	pCi/g	0.149	0.145	0.146	1.96	0.168	U	0.348	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Bi-214	pCi/g	0.329	0.0909	0.0969	1.96	0.0382		0.0867		30
160-43195-31	SAMP	FSS-142-082421	Soil	Bi-212	pCi/g	0.400	0.762	0.763	1.96	0.618	U	1.31	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Pb-214	pCi/g	0.315	0.0898	0.0953	1.96	0.0381		0.0847		30
160-43195-31	SAMP	FSS-142-082421	Soil	Pb-212	pCi/g	0.367	0.0651	0.08	1.96	0.0302		0.0661		30
160-43195-31	SAMP	FSS-142-082421	Soil	Eu-154	pCi/g	0.104	0.0447	0.046	1.96	0.0424		0.089		30
160-43195-31	SAMP	FSS-142-082421	Soil	Th-232	pCi/g	0.414	0.161	0.166	1.96	0.0610		0.144		30
160-43195-32	SAMP	FSS-143-082421	Soil	Cs-137	pCi/g	0.147	0.0591	0.061	1.96	0.0367		0.081		30
160-43195-32	SAMP	FSS-143-082421	Soil	Co-60	pCi/g	0.0263	0.0466	0.0466	1.96	0.0219		0.0549	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	K-40	pCi/g	3.26	0.784	0.850	1.96	0.261		0.633		30
160-43195-32	SAMP	FSS-143-082421	Soil	Na-22	pCi/g	0.0354	0.0231	0.0234	1.96	0.0092		0.0290		30
160-43195-32	SAMP	FSS-143-082421	Soil	Zn-65	pCi/g	-0.00391	0.0409	0.0409	1.96	0.0988	U	0.217	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Ra-226	pCi/g	0.377	0.0909	0.0986	1.96	0.0275		0.0683		30
160-43195-32	SAMP	FSS-143-082421	Soil	Ac-228	pCi/g	0.299	0.125	0.129	1.96	0.0386		0.106		30
160-43195-32	SAMP	FSS-143-082421	Soil	Eu-155	pCi/g	-0.0733	0.114	0.115	1.96	0.162	U	0.334	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Am-241	pCi/g	-0.0573	0.150	0.150	1.96	0.124	U	0.257	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Eu-152	pCi/g	0.0454	0.128	0.128	1.96	0.0721	U	0.152	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Bi-214	pCi/g	0.377	0.0909	0.0986	1.96	0.0275		0.0683		30
160-43195-32	SAMP	FSS-143-082421	Soil	Bi-212	pCi/g	0.00	0.163	0.163	1.96	0.520	U	1.13	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Pb-214	pCi/g	0.419	0.0959	0.105	1.96	0.0297		0.0703		30
160-43195-32	SAMP	FSS-143-082421	Soil	Pb-212	pCi/g	0.377	0.115	0.125	1.96	0.0812		0.17		30
160-43195-32	SAMP	FSS-143-082421	Soil	Eu-154	pCi/g	0.0734	0.0544	0.0549	1.96	0.0425		0.0904	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Th-232	pCi/g	0.299	0.125	0.129	1.96	0.0386		0.106		30
160-43195-33	SAMP	FSS-144-082421	Soil	Cs-137	pCi/g	0.0281	0.0457	0.0458	1.96	0.0355	U	0.0787	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Co-60	pCi/g	-0.0377	0.0636	0.0637	1.96	0.0460	U	0.103	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	K-40	pCi/g	3.55	0.819	0.893	1.96	0.273		0.658		30
160-43195-33	SAMP	FSS-144-082421	Soil	Na-22	pCi/g	-0.0158	0.0478	0.0479	1.96	0.0380	U	0.0868	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Zn-65	pCi/g	-0.0595	0.139	0.139	1.96	0.112	U	0.243	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Ra-226	pCi/g	0.353	0.106	0.112	1.96	0.0382		0.0898		30
160-43195-33	SAMP	FSS-144-082421	Soil	Ac-228	pCi/g	0.487	0.123	0.132	1.96	0.0246		0.0777		30
160-43195-33	SAMP	FSS-144-082421	Soil	Eu-155	pCi/g	0.0392	0.0974	0.0975	1.96	0.108	U	0.225	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Am-241	pCi/g	-0.0587	0.132	0.132	1.96	0.0863	U	0.181	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Eu-152	pCi/g	0.0352	0.045	0.0452	1.96	0.0698	U	0.147	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Bi-214	pCi/g	0.353	0.106	0.112	1.96	0.0382		0.0898		30
160-43195-33	SAMP	FSS-144-082421	Soil	Bi-212	pCi/g	0.177	0.462	0.462	1.96	0.366	U	0.825	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Pb-214	pCi/g	0.308	0.0871	0.0926	1.96	0.0474		0.106		30
160-43195-33	SAMP	FSS-144-082421	Soil	Pb-212	pCi/g	0.385	0.0792	0.093	1.96	0.0396		0.0865		30
160-43195-33	SAMP	FSS-144-082421	Soil	Eu-154	pCi/g	0.0612	0.0748	0.075	1.96	0.0468		0.0989	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Th-232	pCi/g	0.487	0.123	0.132	1.96	0.0246		0.0777		30
160-43195-4	SAMP	FSS-118-082421	Soil	Cs-137	pCi/g	0.0192	0.0651	0.0651	1.96	0.0530	U	0.116	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Co-60	pCi/g	0.0309	0.0247	0.0249	1.96	0.0120		0.0379	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	K-40	pCi/g	4.35	0.931	1.03	1.96	0.121		0.382		30
160-43195-4	SAMP	FSS-118-082421	Soil	Na-22	pCi/g	0.0215	0.0386	0.0386	1.96	0.0276	U	0.0686	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Zn-65	pCi/g	0.0521	0.146	0.146	1.96	0.117	U	0.259	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Ra-226	pCi/g	0.454	0.147	0.154	1.96	0.0648		0.147		30
160-43195-4	SAMP	FSS-118-082421	Soil	Ac-228	pCi/g	0.609	0.174	0.184	1.96	0.0311		0.0985		30
160-43195-4	SAMP	FSS-118-082421	Soil	Eu-155	pCi/g	0.00357	0.0134	0.0134	1.96	0.272	U	0.557	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Am-241	pCi/g	0.0852	0.0785	0.0791	1.96	0.0588		0.128	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Eu-152	pCi/g	0.0945	0.15	0.151	1.96	0.0861		0.182	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Bi-214	pCi/g	0.454	0.147	0.154	1.96	0.0648		0.147		30
160-43195-4	SAMP	FSS-118-082421	Soil	Bi-212	pCi/g	0.204	0.91	0.910	1.96	0.749	U	1.62	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Pb-214	pCi/g	0.377	0.0965	0.104	1.96	0.0493		0.112		30
160-43195-4	SAMP	FSS-118-082421	Soil	Pb-212	pCi/g	0.506	0.0933	0.107	1.96	0.0388		0.0865		30

160-43195-4	SAMP	FSS-118-082421	Soil	Eu-154	pCi/g	0.0648	0.108	0.108	1.96	0.0629		0.133	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Th-232	pCi/g	0.609	0.174	0.184	1.96	0.0311		0.0985		30
160-43195-5	SAMP	FSS-119-082421	Soil	Cs-137	pCi/g	0.00298	0.0482	0.0482	1.96	0.0403	U	0.0867	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Co-60	pCi/g	-0.0447	0.0754	0.0755	1.96	0.0363	U	0.0814	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	K-40	pCi/g	2.54	0.567	0.622	1.96	0.0769		0.243		30
160-43195-5	SAMP	FSS-119-082421	Soil	Na-22	pCi/g	-0.0126	0.0381	0.0382	1.96	0.0303	U	0.0692	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Zn-65	pCi/g	0.00	0.0348	0.0348	1.96	0.0837	U	0.183	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Ra-226	pCi/g	0.283	0.0648	0.0710	1.96	0.0090		0.0285		30
160-43195-5	SAMP	FSS-119-082421	Soil	Ac-228	pCi/g	0.386	0.0824	0.0910	1.96	0.0337		0.0901		30
160-43195-5	SAMP	FSS-119-082421	Soil	Eu-155	pCi/g	0.00	0.062	0.062	1.96	0.164	U	0.335	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Am-241	pCi/g	0.0472	0.101	0.101	1.96	0.0829	U	0.173	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Eu-152	pCi/g	0.0403	0.0941	0.0942	1.96	0.0542	U	0.115	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Bi-214	pCi/g	0.283	0.0648	0.0710	1.96	0.0090		0.0285		30
160-43195-5	SAMP	FSS-119-082421	Soil	Bi-212	pCi/g	0.00	0.224	0.224	1.96	0.0629	U	0.199	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Pb-214	pCi/g	0.223	0.0837	0.0867	1.96	0.0550		0.119		30
160-43195-5	SAMP	FSS-119-082421	Soil	Pb-212	pCi/g	0.340	0.0606	0.0744	1.96	0.0255		0.0567		30
160-43195-5	SAMP	FSS-119-082421	Soil	Eu-154	pCi/g	0.0232	0.0265	0.0266	1.96	0.0416	U	0.0876	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Th-232	pCi/g	0.386	0.0824	0.0910	1.96	0.0337		0.0901		30
160-43195-6	SAMP	FSS-120-082421	Soil	Cs-137	pCi/g	-0.0162	0.0530	0.0530	1.96	0.0431	U	0.0941	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Co-60	pCi/g	-0.0369	0.0563	0.0564	1.96	0.0462	U	0.104	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	K-40	pCi/g	4.68	0.944	1.05	1.96	0.283		0.682		30
160-43195-6	SAMP	FSS-120-082421	Soil	Na-22	pCi/g	-0.0385	0.0583	0.0584	1.96	0.0444	U	0.0999	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Zn-65	pCi/g	0.00	0.0144	0.0144	1.96	0.110	U	0.239	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Ra-226	pCi/g	0.124	0.0676	0.0688	1.96	0.154	U	0.322	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Ac-228	pCi/g	0.544	0.153	0.162	1.96	0.0486		0.127		30
160-43195-6	SAMP	FSS-120-082421	Soil	Eu-155	pCi/g	-0.00216	0.00461	0.00462	1.96	0.148	U	0.307	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Am-241	pCi/g	0.0669	0.168	0.168	1.96	0.139	U	0.287	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Eu-152	pCi/g	0.0779	0.144	0.145	1.96	0.0706		0.149	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Bi-214	pCi/g	0.124	0.0676	0.0688	1.96	0.154	U	0.322	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Bi-212	pCi/g	0.254	0.566	0.567	1.96	0.449	U	0.995	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Pb-214	pCi/g	0.283	0.0932	0.0976	1.96	0.0426		0.0966		30
160-43195-6	SAMP	FSS-120-082421	Soil	Pb-212	pCi/g	0.345	0.0822	0.0932	1.96	0.0463		0.100		30
160-43195-6	SAMP	FSS-120-082421	Soil	Eu-154	pCi/g	0.0712	0.0527	0.0532	1.96	0.0470		0.0997	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Th-232	pCi/g	0.544	0.153	0.162	1.96	0.0486		0.127		30
160-43195-7	SAMP	FSS-121-082421	Soil	Cs-137	pCi/g	0.0012	0.0301	0.0301	1.96	0.0251	U	0.0564	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Co-60	pCi/g	0.0334	0.0207	0.0210	1.96	0.0078		0.0246		30
160-43195-7	SAMP	FSS-121-082421	Soil	K-40	pCi/g	2.99	0.675	0.738	1.96	0.212		0.515		30
160-43195-7	SAMP	FSS-121-082421	Soil	Na-22	pCi/g	-0.0494	0.0536	0.0538	1.96	0.0400	U	0.0887	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Zn-65	pCi/g	-0.00908	0.0984	0.0984	1.96	0.0818	U	0.179	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Ra-226	pCi/g	0.163	0.0724	0.0743	1.96	0.0398		0.0903		30
160-43195-7	SAMP	FSS-121-082421	Soil	Ac-228	pCi/g	0.180	0.165	0.166	1.96	0.0923		0.208	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Eu-155	pCi/g	0.0182	0.0676	0.0676	1.96	0.0845	U	0.177	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Am-241	pCi/g	-0.053	0.118	0.118	1.96	0.0975	U	0.202	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Eu-152	pCi/g	0.0384	0.0962	0.0963	1.96	0.0468	U	0.0998	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Bi-214	pCi/g	0.163	0.0724	0.0743	1.96	0.0398		0.0903		30
160-43195-7	SAMP	FSS-121-082421	Soil	Bi-212	pCi/g	0.179	0.417	0.417	1.96	0.331	U	0.736	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Pb-214	pCi/g	0.240	0.0784	0.0821	1.96	0.0353		0.0794		30
160-43195-7	SAMP	FSS-121-082421	Soil	Pb-212	pCi/g	0.372	0.0625	0.0783	1.96	0.0236		0.053		30
160-43195-7	SAMP	FSS-121-082421	Soil	Eu-154	pCi/g	0.0342	0.0699	0.0700	1.96	0.0419	U	0.0882	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Th-232	pCi/g	0.180	0.165	0.166	1.96	0.0923		0.208	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Cs-137	pCi/g	-0.0495	0.0766	0.0767	1.96	0.0607	U	0.131	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Co-60	pCi/g	-0.0305	0.0781	0.0782	1.96	0.0377	U	0.0885	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	K-40	pCi/g	2.86	0.730	0.783	1.96	0.113		0.357		30
160-43195-8	SAMP	FSS-122-082421	Soil	Na-22	pCi/g	0.00	0.0129	0.0129	1.96	0.0108	U	0.0343	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Zn-65	pCi/g	-0.120	0.194	0.194	1.96	0.155	U	0.332	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Ra-226	pCi/g	0.404	0.143	0.149	1.96	0.0585		0.133		30
160-43195-8	SAMP	FSS-122-082421	Soil	Ac-228	pCi/g	0.528	0.145	0.154	1.96	0.0291		0.0921		30
160-43195-8	SAMP	FSS-122-082421	Soil	Eu-155	pCi/g	0.0220	0.0656	0.0657	1.96	0.276	U	0.564	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Am-241	pCi/g	0.0158	0.138	0.138	1.96	0.0915	U	0.193	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Eu-152	pCi/g	0.0474	0.0674	0.0676	1.96	0.214	U	0.445	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Bi-214	pCi/g	0.404	0.143	0.149	1.96	0.0585		0.133		30
160-43195-8	SAMP	FSS-122-082421	Soil	Bi-212	pCi/g	0.439	0.772	0.773	1.96	0.6100	U	1.33	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Pb-214	pCi/g	0.368	0.0989	0.105	1.96	0.0447		0.102		30

160-43195-8	SAMP	FSS-122-082421	Soil	Pb-212	pCi/g	0.480	0.0941	0.106	1.96	0.0462		0.101		30
160-43195-8	SAMP	FSS-122-082421	Soil	Eu-154	pCi/g	0.0131	0.0167	0.0167	1.96	0.0611	U	0.129	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Th-232	pCi/g	0.528	0.145	0.154	1.96	0.0291		0.0921		30
160-43195-9	SAMP	FSS-123-082421	Soil	Cs-137	pCi/g	-0.0174	0.0395	0.0395	1.96	0.0315	U	0.0693	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Co-60	pCi/g	-0.0116	0.0553	0.0554	1.96	0.0273	U	0.0641	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	K-40	pCi/g	3.30	0.668	0.746	1.96	0.0819		0.259		30
160-43195-9	SAMP	FSS-123-082421	Soil	Na-22	pCi/g	-0.046	0.0506	0.0508	1.96	0.0373	U	0.0838	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Zn-65	pCi/g	0.0351	0.118	0.118	1.96	0.0966	U	0.209	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Ra-226	pCi/g	0.348	0.0877	0.0946	1.96	0.0208		0.0527		30
160-43195-9	SAMP	FSS-123-082421	Soil	Ac-228	pCi/g	0.399	0.118	0.125	1.96	0.0928		0.210		30
160-43195-9	SAMP	FSS-123-082421	Soil	Eu-155	pCi/g	0.0702	0.227	0.227	1.96	0.189	U	0.387	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Am-241	pCi/g	0.0492	0.108	0.108	1.96	0.0887	U	0.185	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Eu-152	pCi/g	0.0773	0.140	0.141	1.96	0.0482		0.103	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Bi-214	pCi/g	0.348	0.0877	0.0946	1.96	0.0208		0.0527		30
160-43195-9	SAMP	FSS-123-082421	Soil	Bi-212	pCi/g	0.00	0.309	0.309	1.96	0.2986	U	0.675	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Pb-214	pCi/g	0.224	0.0781	0.0814	1.96	0.0335		0.0763		30
160-43195-9	SAMP	FSS-123-082421	Soil	Pb-212	pCi/g	0.31	0.0604	0.0721	1.96	0.0263		0.0586		30
160-43195-9	SAMP	FSS-123-082421	Soil	Eu-154	pCi/g	0.0528	0.0659	0.0661	1.96	0.0318		0.0682	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Th-232	pCi/g	0.399	0.118	0.125	1.96	0.0928		0.210		30
LCS 160-525240/2-A	QC_LCS	LCS 160-525240/2-A	Soil	Cs-137	pCi/g	29.4	0.749	3.04	1.96	0.153		0.318		30
LCS 160-525240/2-A	QC_LCS	LCS 160-525240/2-A	Soil	Co-60	pCi/g	9.46	0.335	0.982	1.96	0.0717		0.159		30
LCS 160-525240/2-A	QC_LCS	LCS 160-525240/2-A	Soil	Am-241	pCi/g	102.5	1.76	11.8	1.96	0.658		1.33		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Cs-137	pCi/g	26.7	0.611	2.79	1.96	0.0674		0.144		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Co-60	pCi/g	8.653	0.299	0.902	1.96	0.0388		0.0916		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Am-241	pCi/g	101.9	1.41	10.5	1.96	0.506		1.02		30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Cs-137	pCi/g	-0.0187	0.0248	0.0249	1.96	0.0353	U	0.0797	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Co-60	pCi/g	-0.004744	0.00439	0.00441	1.96	0.0385	U	0.0904	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	K-40	pCi/g	-0.063	0.682	0.682	1.96	0.421	U	0.976	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Na-22	pCi/g	0.03793	0.0263	0.0265	1.96	0.0110		0.0349		30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Zn-65	pCi/g	0.0006448	0.0989	0.0989	1.96	0.0831	U	0.189	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Ra-226	pCi/g	0.05115	0.0556	0.0558	1.96	0.132	U	0.280	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Ac-228	pCi/g	-0.08219	0.0779	0.0784	1.96	0.0993	U	0.233	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Eu-155	pCi/g	0.007543	0.0639	0.0639	1.96	0.140	U	0.293	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Am-241	pCi/g	-0.03141	0.107	0.107	1.96	0.0877	U	0.186	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Eu-152	pCi/g	0.07632	0.123	0.123	1.96	0.0518		0.113	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Bi-214	pCi/g	0.05115	0.0556	0.0558	1.96	0.132	U	0.280	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Bi-212	pCi/g	-0.04052	0.600	0.600	1.96	0.500	U	1.11	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Pb-214	pCi/g	0.103	0.0697	0.0705	1.96	0.0379		0.0889		30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Pb-212	pCi/g	-0.03236	0.0247	0.025	1.96	0.0764	U	0.162	U	30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Eu-154	pCi/g	0.07996	0.0522	0.0529	1.96	0.0333		0.0731		30
MB 160-525240/1-A	QC_BLK	MB 160-525240/1-A	Soil	Th-232	pCi/g	-0.08219	0.0779	0.0784	1.96	0.0993	U	0.233	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Cs-137	pCi/g	-0.0275	0.0681	0.0681	1.96	0.0545	U	0.120	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Co-60	pCi/g	-0.001212	0.0649	0.0649	1.96	0.0339	U	0.0836	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	K-40	pCi/g	-0.4152	0.770	0.771	1.96	0.514	U	1.19	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Na-22	pCi/g	0.02822	0.0247	0.0249	1.96	0.0132		0.0416	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Zn-65	pCi/g	0.00	0.0197	0.0197	1.96	0.0937	U	0.215	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Ra-226	pCi/g	-0.08077	0.124	0.124	1.96	0.2009	U	0.421	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Ac-228	pCi/g	0.04231	0.111	0.111	1.96	0.115	U	0.270	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-155	pCi/g	-0.07216	0.219	0.220	1.96	0.182	U	0.377	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Am-241	pCi/g	0.04333	0.0992	0.0993	1.96	0.0637	U	0.14	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-152	pCi/g	0.08254	0.117	0.117	1.96	0.0487		0.108	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Bi-214	pCi/g	-0.08077	0.124	0.124	1.96	0.201	U	0.421	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Bi-212	pCi/g	-0.341	0.733	0.734	1.96	0.579	U	1.29	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Pb-214	pCi/g	-0.0488	0.0629	0.0631	1.96	0.0928	U	0.201	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Pb-212	pCi/g	-0.04483	0.148	0.148	1.96	0.0971	U	0.205	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-154	pCi/g	0.04157	0.0703	0.0704	1.96	0.0409		0.0893	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Th-232	pCi/g	0.04231	0.111	0.111	1.96	0.115	U	0.270	U	30
160-43195-1	SAMP	FSS-115-082421	Soil	Ni-63	pCi/g	1.13	1.04	1.05	1.96	0.848		1.77	U	60
160-43195-10	SAMP	FSS-124-082421	Soil	Ni-63	pCi/g	0.273	0.753	0.754	1.96	0.634	U	1.32	U	60
160-43195-11	SAMP	FSS-125-082421	Soil	Ni-63	pCi/g	0.248	0.749	0.749	1.96	0.625	U	1.30	U	60
160-43195-12	SAMP	FSS-126-082421	Soil	Ni-63	pCi/g	0.844	0.783	0.788	1.96	0.633		1.32	U	60
160-43195-12 DU	QC_DUP	160-43195-12 DU	Soil	Ni-63	pCi/g	0.03536	0.779	0.779	1.96	0.665	U	1.39	U	60
160-43195-13	SAMP	FSS-127-082421	Soil	Ni-63	pCi/g	-0.128	0.713	0.713	1.96	0.616	U	1.29	U	60

160-43195-14	SAMP	FSS-128-082421	Soil	Ni-63	pCi/g	0.730	0.956	0.959	1.96	0.789	U	1.65	U	60
160-43195-15	SAMP	FSS-129-082421	Soil	Ni-63	pCi/g	0.948	1.05	1.06	1.96	0.858		1.80	U	60
160-43195-16	SAMP	FSS-130-082421	Soil	Ni-63	pCi/g	1.50	1.03	1.04	1.96	0.829		1.74	U	60
160-43195-17	SAMP	FSS-131-082421	Soil	Ni-63	pCi/g	0.276	0.875	0.875	1.96	0.741	U	1.55	U	60
160-43195-18	SAMP	FSS-132-082421	Soil	Ni-63	pCi/g	1.11	0.848	0.856	1.96	0.683		1.43	U	60
160-43195-2	SAMP	FSS-116-082421	Soil	Ni-63	pCi/g	0.275	0.757	0.757	1.96	0.629	U	1.32	U	60
160-43195-22	SAMP	FSS-133-082421	Soil	Ni-63	pCi/g	1.68	1.04	1.05	1.96	0.817		1.71	U	60
160-43195-23	SAMP	FSS-134-082421	Soil	Ni-63	pCi/g	1.32	0.977	0.986	1.96	0.786		1.65	U	60
160-43195-24	SAMP	FSS-135-082421	Soil	Ni-63	pCi/g	1.36	0.940	0.950	1.96	0.753		1.58	U	60
160-43195-25	SAMP	FSS-139-082421	Soil	Ni-63	pCi/g	1.21	0.904	0.913	1.96	0.725		1.52	U	60
160-43195-26	SAMP	FSS-140-082421	Soil	Ni-63	pCi/g	2.46	1.25	1.28	1.96	0.981		2.06		60
160-43195-27	SAMP	FSS-141-082421	Soil	Ni-63	pCi/g	1.74	0.933	0.95	1.96	0.726		1.52		60
160-43195-28	SAMP	FSS-339-082421	Soil	Ni-63	pCi/g	1.17	1.02	1.03	1.96	0.828		1.73	U	60
160-43195-29	SAMP	FSS-340-082421	Soil	Ni-63	pCi/g	0.941	0.864	0.869	1.96	0.702		1.47	U	60
160-43195-3	SAMP	FSS-117-082421	Soil	Ni-63	pCi/g	-0.193	0.778	0.778	1.96	0.674	U	1.41	U	60
160-43195-30	SAMP	FSS-341-082421	Soil	Ni-63	pCi/g	1.10	0.991	0.997	1.96	0.810		1.70	U	60
160-43195-31	SAMP	FSS-142-082421	Soil	Ni-63	pCi/g	0.890	0.963	0.967	1.96	0.788		1.65	U	60
160-43195-32	SAMP	FSS-143-082421	Soil	Ni-63	pCi/g	-0.0142	1.01	1.01	1.96	0.867	U	1.82	U	60
160-43195-33	SAMP	FSS-144-082421	Soil	Ni-63	pCi/g	1.13	0.936	0.944	1.96	0.757		1.59	U	60
160-43195-33 DU	QC_DUP	160-43195-33 DU	Soil	Ni-63	pCi/g	2.46	1.99	2.00	1.96	1.61		3.37	U	60
160-43195-4	SAMP	FSS-118-082421	Soil	Ni-63	pCi/g	0.0393	0.876	0.876	1.96	0.748	U	1.56	U	60
160-43195-5	SAMP	FSS-119-082421	Soil	Ni-63	pCi/g	0.193	0.843	0.843	1.96	0.718	U	1.50	U	60
160-43195-6	SAMP	FSS-120-082421	Soil	Ni-63	pCi/g	-0.160	0.785	0.785	1.96	0.686	U	1.43	U	60
160-43195-7	SAMP	FSS-121-082421	Soil	Ni-63	pCi/g	0.00	0.794	0.794	1.96	0.684	U	1.43	U	60
160-43195-8	SAMP	FSS-122-082421	Soil	Ni-63	pCi/g	1.05	0.885	0.891	1.96	0.720		1.50	U	60
160-43195-9	SAMP	FSS-123-082421	Soil	Ni-63	pCi/g	0.214	0.791	0.792	1.96	0.668	U	1.40	U	60
LCS 160-527434/2-A	QC_LCS	LCS 160-527434/2-A	Soil	Ni-63	pCi/g	17.81	1.41	2.30	1.96	0.671		1.40		60
LCS 160-527686/2-A	QC_LCS	LCS 160-527686/2-A	Soil	Ni-63	pCi/g	19.98	1.56	2.56	1.96	0.710		1.49		60
MB 160-527434/1-A	QC_BLK	MB 160-527434/1-A	Soil	Ni-63	pCi/g	0.6825	1.08	1.08	1.96	0.896	U	1.87	U	60
MB 160-527686/1-A	QC_BLK	MB 160-527686/1-A	Soil	Ni-63	pCi/g	1.172	1.02	1.03	1.96	0.827		1.73	U	60
160-43195-1	SAMP	FSS-115-082421	Soil	Pu-241	pCi/g	1.91	2.11	2.12	1.96	1.36		3.00	U	30
160-43195-10	SAMP	FSS-124-082421	Soil	Pu-241	pCi/g	-0.950	3.77	3.77	1.96	3.24	U	6.92	U	30
160-43195-11	SAMP	FSS-125-082421	Soil	Pu-241	pCi/g	-1.58	3.71	3.71	1.96	3.24	U	6.91	U	30
160-43195-12	SAMP	FSS-126-082421	Soil	Pu-241	pCi/g	0.639	1.41	1.41	1.96	0.94	U	2.09	U	30
160-43195-13	SAMP	FSS-127-082421	Soil	Pu-241	pCi/g	-0.231	1.59	1.59	1.96	1.15	U	2.54	U	30
160-43195-14	SAMP	FSS-128-082421	Soil	Pu-241	pCi/g	1.30	1.81	1.82	1.96	1.18		2.61	U	30
160-43195-15	SAMP	FSS-129-082421	Soil	Pu-241	pCi/g	0.643	2.18	2.18	1.96	1.53	U	3.37	U	30
160-43195-16	SAMP	FSS-130-082421	Soil	Pu-241	pCi/g	0.875	1.48	1.48	1.96	0.970	U	2.14	U	30
160-43195-17	SAMP	FSS-131-082421	Soil	Pu-241	pCi/g	-0.992	1.50	1.51	1.96	1.12	U	2.47	U	30
160-43195-18	SAMP	FSS-132-082421	Soil	Pu-241	pCi/g	1.43	1.79	1.79	1.96	1.16		2.57	U	30
160-43195-2	SAMP	FSS-116-082421	Soil	Pu-241	pCi/g	-1.34	1.83	1.83	1.96	1.40	U	3.10	U	30
160-43195-22	SAMP	FSS-133-082421	Soil	Pu-241	pCi/g	0.041	1.67	1.67	1.96	1.39	U	3.00	U	30
160-43195-23	SAMP	FSS-134-082421	Soil	Pu-241	pCi/g	-1.25	1.42	1.42	1.96	1.27	U	2.75	U	30
160-43195-24	SAMP	FSS-135-082421	Soil	Pu-241	pCi/g	-0.365	4.07	4.07	1.96	3.47	U	7.48	U	30
160-43195-25	SAMP	FSS-139-082421	Soil	Pu-241	pCi/g	0.270	1.54	1.54	1.96	1.26	U	2.72	U	30
160-43195-26	SAMP	FSS-140-082421	Soil	Pu-241	pCi/g	-0.109	1.37	1.37	1.96	1.15	U	2.48	U	30
160-43195-27	SAMP	FSS-141-082421	Soil	Pu-241	pCi/g	-0.124	1.57	1.57	1.96	1.31	U	2.83	U	30
160-43195-28	SAMP	FSS-339-082421	Soil	Pu-241	pCi/g	-1.14	1.32	1.33	1.96	1.18	U	2.56	U	30
160-43195-29	SAMP	FSS-340-082421	Soil	Pu-241	pCi/g	0.162	1.48	1.48	1.96	1.24	U	2.68	U	30
160-43195-3	SAMP	FSS-117-082421	Soil	Pu-241	pCi/g	-0.940	1.54	1.55	1.96	1.14	U	2.52	U	30
160-43195-30	SAMP	FSS-341-082421	Soil	Pu-241	pCi/g	-0.736	1.55	1.55	1.96	1.33	U	2.87	U	30
160-43195-31	SAMP	FSS-142-082421	Soil	Pu-241	pCi/g	-0.505	1.56	1.56	1.96	1.34	U	2.89	U	30
160-43195-32	SAMP	FSS-143-082421	Soil	Pu-241	pCi/g	-1.02	1.54	1.54	1.96	1.37	U	2.95	U	30
160-43195-33	SAMP	FSS-144-082421	Soil	Pu-241	pCi/g	-0.890	1.75	1.75	1.96	1.52	U	3.29	U	30
160-43195-4	SAMP	FSS-118-082421	Soil	Pu-241	pCi/g	1	2.19	2.19	1.96	1.46	U	3.22	U	30
160-43195-5	SAMP	FSS-119-082421	Soil	Pu-241	pCi/g	-0.108	1.48	1.48	1.96	1.05	U	2.32	U	30
160-43195-6	SAMP	FSS-120-082421	Soil	Pu-241	pCi/g	0.270	1.31	1.31	1.96	0.896	U	1.98	U	30
160-43195-7	SAMP	FSS-121-082421	Soil	Pu-241	pCi/g	0.383	1.42	1.42	1.96	0.981	U	2.17	U	30
160-43195-8	SAMP	FSS-122-082421	Soil	Pu-241	pCi/g	0.897	1.41	1.41	1.96	0.936	U	2.07	U	30
160-43195-9	SAMP	FSS-123-082421	Soil	Pu-241	pCi/g	-3.61	4.44	4.45	1.96	3.97	U	8.47	U	30
LCS 160-526533/2-A	QC_LCS	LCS 160-526533/2-A	Soil	Pu-241	pCi/g	22.3	3.33	3.87	1.96	1.32		2.92		30
LCS 160-528278/2-A	QC_LCS	LCS 160-528278/2-A	Soil	Pu-241	pCi/g	46.19	5.77	7.06	1.96	2.78		5.93		30
LCSD 160-528278/3	QC_LCSD	LCSD 160-528278/3-A	Soil	Pu-241	pCi/g	51.62	6.11	7.62	1.96	2.87		6.14		30

MB 160-526533/1-A	QC_BLK	MB 160-526533/1-A	Soil	Pu-241	pCi/g	1.213	1.64	1.65	1.96	1.10		2.42	U	30
MB 160-528278/1-A	QC_BLK	MB 160-528278/1-A	Soil	Pu-241	pCi/g	-2.593	3.27	3.28	1.96	2.87	U	6.13	U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43195-19	SAMP	FSS-136-082421	Soil	Sr-90	pCi/g	-0.121	0.139	0.139	1.96	0.127	U	0.275	U	200
160-43195-20	SAMP	FSS-137-082421	Soil	Sr-90	pCi/g	-0.0183	0.140	0.140	1.96	0.119	U	0.261	U	200
160-43195-21	SAMP	FSS-138-082421	Soil	Sr-90	pCi/g	0.0715	0.177	0.177	1.96	0.143	U	0.310	U	200
LCS 160-527618/2-A	QC_LCS	LCS 160-527618/2-A	Soil	Sr-90	pCi/g	6.886	0.449	0.713	1.96	0.110		0.240		200
MB 160-527618/1-A	QC_BLK	MB 160-527618/1-A	Soil	Sr-90	pCi/g	0.06126	0.152	0.152	1.96	0.123	U	0.267	U	200
160-43195-19	SAMP	FSS-136-082421	Soil	H-3	pCi/g	-0.00888	0.201	0.201	1.96	0.168	U	0.366	U	20
160-43195-20	SAMP	FSS-137-082421	Soil	H-3	pCi/g	0.0203	0.212	0.212	1.96	0.176	U	0.384	U	20
160-43195-21	SAMP	FSS-138-082421	Soil	H-3	pCi/g	-0.00539	0.218	0.218	1.96	0.185	U	0.404	U	20
160-43195-19	SAMP	FSS-136-082421	Soil	Pu-238	pCi/g	-0.0292	0.029	0.0291	1.96	0.0378	U	0.108	U	240
160-43195-19	SAMP	FSS-136-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0478	0.0221	0.0224	1.96	0.0415	U	0.115	U	240
160-43195-20	SAMP	FSS-137-082421	Soil	Pu-238	pCi/g	0.00	0.0251	0.0251	1.96	0.0211	U	0.0665	U	240
160-43195-20	SAMP	FSS-137-082421	Soil	Pu-239/Pu-240	pCi/g	-0.00203	0.00398	0.00398	1.96	0.00747	U	0.0393	U	240
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Pu-238	pCi/g	-0.001989	0.0039	0.0039	1.96	0.0073	U	0.0385	U	240
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Pu-239/Pu-240	pCi/g	-0.003983	0.00552	0.00553	1.96	0.0104	U	0.0446	U	240
160-43195-21	SAMP	FSS-138-082421	Soil	Pu-238	pCi/g	-0.0221	0.0205	0.0205	1.96	0.0272	U	0.0765	U	240
160-43195-21	SAMP	FSS-138-082421	Soil	Pu-239/Pu-240	pCi/g	-0.0222	0.0125	0.0127	1.96	0.0235	U	0.0693	U	240
160-43195-19	SAMP	FSS-136-082421	Soil	U-233/U-234	pCi/g	0.296	0.115	0.118	1.96	0.0227		0.0786		240
160-43195-19	SAMP	FSS-136-082421	Soil	U-235/U-236	pCi/g	0.0103	0.041	0.041	1.96	0.0283	U	0.0978	U	240
160-43195-19	SAMP	FSS-136-082421	Soil	U-238	pCi/g	0.270	0.108	0.111	1.96	0.0143		0.0618		240
160-43195-20	SAMP	FSS-137-082421	Soil	U-233/U-234	pCi/g	0.263	0.0954	0.0979	1.96	0.0228		0.0705		240
160-43195-20	SAMP	FSS-137-082421	Soil	U-235/U-236	pCi/g	0.00	0.00505	0.00505	1.96	0.00948	U	0.0309	U	240
160-43195-20	SAMP	FSS-137-082421	Soil	U-238	pCi/g	0.302	0.0987	0.102	1.96	0.0107		0.0463		240
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	U-233/U-234	pCi/g	0.2613	0.0965	0.0989	1.96	0.0255		0.0761		240
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	U-235/U-236	pCi/g	0.02861	0.0357	0.0358	1.96	0.00957		0.0503	U	240
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	U-238	pCi/g	0.1794	0.0769	0.0783	1.96	0.0109		0.0467		240
160-43195-21	SAMP	FSS-138-082421	Soil	U-233/U-234	pCi/g	0.188	0.0795	0.0810	1.96	0.00794		0.0418		240
160-43195-21	SAMP	FSS-138-082421	Soil	U-235/U-236	pCi/g	0.0215	0.0298	0.0298	1.96	0.00988		0.0322	U	240
160-43195-21	SAMP	FSS-138-082421	Soil	U-238	pCi/g	0.226	0.0881	0.0900	1.96	0.0137		0.0533		240
LCS 160-526536/2-A	QC_LCS	LCS 160-526536/2-A	Soil	U-233/U-234	pCi/g	7.112	0.468	0.749	1.96	0.0127		0.0495		240
LCS 160-526536/2-A	QC_LCS	LCS 160-526536/2-A	Soil	U-238	pCi/g	6.848	0.458	0.726	1.96	0.00734		0.0239		240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-233/U-234	pCi/g	0.02787	0.0317	0.0318	1.96	0.0104		0.0446	U	240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-235/U-236	pCi/g	-0.002477	0.00485	0.00486	1.96	0.00911	U	0.0479	U	240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-238	pCi/g	0.03973	0.0348	0.035	1.96	0.00731		0.0238		240
160-43195-19	SAMP	FSS-136-082421	Soil	C-14	pCi/g	0.0779	0.600	0.600	1.96	0.497	U	1.06	U	20
160-43195-20	SAMP	FSS-137-082421	Soil	C-14	pCi/g	-0.0357	0.780	0.780	1.96	0.655	U	1.39	U	20
160-43195-21	SAMP	FSS-138-082421	Soil	C-14	pCi/g	0.371	0.808	0.809	1.96	0.657	U	1.40	U	20
160-43195-19	SAMP	FSS-136-082421	Soil	Cs-137	pCi/g	-0.0462	0.0956	0.0957	1.96	0.0776	U	0.165	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Co-60	pCi/g	0.00832	0.0782	0.0782	1.96	0.0391	U	0.0918	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	K-40	pCi/g	6.64	1.13	1.31	1.96	0.117		0.370		30
160-43195-19	SAMP	FSS-136-082421	Soil	Na-22	pCi/g	-0.0386	0.0613	0.0614	1.96	0.0463	U	0.106	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Zn-65	pCi/g	-0.00503	0.174	0.174	1.96	0.146	U	0.315	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Ra-226	pCi/g	0.624	0.157	0.169	1.96	0.0613		0.139		30
160-43195-19	SAMP	FSS-136-082421	Soil	Ac-228	pCi/g	1.19	0.192	0.225	1.96	0.0641		0.163		30
160-43195-19	SAMP	FSS-136-082421	Soil	Eu-155	pCi/g	0.116	0.387	0.387	1.96	0.3231	U	0.659	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Am-241	pCi/g	0.0789	0.208	0.208	1.96	0.173	U	0.356	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Eu-152	pCi/g	0.110	0.193	0.194	1.96	0.0959		0.202	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Bi-214	pCi/g	0.624	0.157	0.169	1.96	0.0613		0.139		30
160-43195-19	SAMP	FSS-136-082421	Soil	Bi-212	pCi/g	0.228	0.621	0.621	1.96	0.496	U	1.11	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Pb-214	pCi/g	0.705	0.159	0.173	1.96	0.0653		0.144		30
160-43195-19	SAMP	FSS-136-082421	Soil	Pb-212	pCi/g	1.06	0.134	0.172	1.96	0.0586		0.126		30
160-43195-19	SAMP	FSS-136-082421	Soil	Eu-154	pCi/g	0.0266	0.141	0.141	1.96	0.0764	U	0.160	U	30
160-43195-19	SAMP	FSS-136-082421	Soil	Th-232	pCi/g	1.19	0.192	0.225	1.96	0.0641		0.163		30
160-43195-20	SAMP	FSS-137-082421	Soil	Cs-137	pCi/g	0.0186	0.0488	0.0489	1.96	0.0394	U	0.0858	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Co-60	pCi/g	-0.00895	0.0604	0.0604	1.96	0.0301	U	0.0705	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	K-40	pCi/g	4.59	0.879	0.992	1.96	0.243		0.591		30
160-43195-20	SAMP	FSS-137-082421	Soil	Na-22	pCi/g	-0.0148	0.0447	0.0447	1.96	0.0356	U	0.0811	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Zn-65	pCi/g	0.0132	0.106	0.106	1.96	0.0880	U	0.194	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Ra-226	pCi/g	0.0258	0.151	0.151	1.96	0.152	U	0.315	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Ac-228	pCi/g	0.508	0.0999	0.112	1.96	0.0284		0.0834		30
160-43195-20	SAMP	FSS-137-082421	Soil	Eu-155	pCi/g	0.00	0.0868	0.0868	1.96	0.134	U	0.277	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Am-241	pCi/g	0.0570	0.122	0.122	1.96	0.100	U	0.208	U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Eu-152	pCi/g	0.0601	0.0951	0.0953	1.96	0.0714	U	0.150	U	30

160-43195-20	SAMP	FSS-137-082421	Soil	Bi-214	pCi/g	0.0258	0.151	0.151	1.96	0.152 U	0.315 U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Bi-212	pCi/g	-0.466	0.690	0.691	1.96	0.544 U	1.17 U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Pb-214	pCi/g	0.356	0.0871	0.0943	1.96	0.0367	0.0835	30
160-43195-20	SAMP	FSS-137-082421	Soil	Pb-212	pCi/g	0.484	0.0797	0.101	1.96	0.0346	0.0759	30
160-43195-20	SAMP	FSS-137-082421	Soil	Eu-154	pCi/g	0.00994	0.0561	0.0561	1.96	0.0466 U	0.0983 U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Th-232	pCi/g	0.508	0.0999	0.112	1.96	0.0284	0.0834	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Cs-137	pCi/g	-0.02723	0.0451	0.0452	1.96	0.0354 U	0.0775 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Co-60	pCi/g	0.01202	0.00833	0.00841	1.96	0.0203 U	0.0505 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	K-40	pCi/g	5.061	0.848	0.988	1.96	0.0861	0.272	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Na-22	pCi/g	0.009428	0.0349	0.0349	1.96	0.0277 U	0.065 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Zn-65	pCi/g	0.03418	0.120	0.120	1.96	0.0977 U	0.212 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Ra-226	pCi/g	0.3845	0.101	0.108	1.96	0.0309	0.0735	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Ac-228	pCi/g	0.4019	0.107	0.114	1.96	0.0218	0.0690	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Eu-155	pCi/g	0.02576	0.0962	0.0962	1.96	0.192 U	0.394 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Am-241	pCi/g	0.05407	0.128	0.129	1.96	0.106 U	0.220 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Eu-152	pCi/g	0.05483	0.145	0.145	1.96	0.0667 U	0.140 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Bi-214	pCi/g	0.3845	0.101	0.108	1.96	0.0309	0.0735	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Bi-212	pCi/g	0.03024	0.572	0.572	1.96	0.478 U	1.04 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Pb-214	pCi/g	0.371	0.0756	0.0845	1.96	0.0263	0.0622	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Pb-212	pCi/g	0.4172	0.0691	0.087	1.96	0.0265	0.0593	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Eu-154	pCi/g	0.05061	0.0819	0.0821	1.96	0.0453	0.0955 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Th-232	pCi/g	0.4019	0.107	0.114	1.96	0.0218	0.0690	30
160-43195-21	SAMP	FSS-138-082421	Soil	Cs-137	pCi/g	0.048	0.0277	0.0281	1.96	0.0148	0.0362	30
160-43195-21	SAMP	FSS-138-082421	Soil	Co-60	pCi/g	-0.00605	0.0408	0.0408	1.96	0.0201 U	0.0501 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	K-40	pCi/g	4.43	0.846	0.955	1.96	0.245	0.589	30
160-43195-21	SAMP	FSS-138-082421	Soil	Na-22	pCi/g	0.0152	0.0272	0.0272	1.96	0.0194 U	0.0484 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Zn-65	pCi/g	-0.00839	0.108	0.108	1.96	0.0898 U	0.197 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Ra-226	pCi/g	0.380	0.101	0.108	1.96	0.0395	0.0907	30
160-43195-21	SAMP	FSS-138-082421	Soil	Ac-228	pCi/g	0.376	0.109	0.115	1.96	0.0683	0.162	30
160-43195-21	SAMP	FSS-138-082421	Soil	Eu-155	pCi/g	-0.000841	0.120	0.120	1.96	0.0882 U	0.186 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Am-241	pCi/g	0.0445	0.102	0.102	1.96	0.0839 U	0.176 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Eu-152	pCi/g	0.0559	0.0969	0.0971	1.96	0.0558	0.118 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Bi-214	pCi/g	0.380	0.101	0.108	1.96	0.0395	0.0907	30
160-43195-21	SAMP	FSS-138-082421	Soil	Bi-212	pCi/g	0.289	0.456	0.457	1.96	0.351 U	0.784 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Pb-214	pCi/g	0.299	0.0757	0.0815	1.96	0.0368	0.0833	30
160-43195-21	SAMP	FSS-138-082421	Soil	Pb-212	pCi/g	0.0349	0.0838	0.084	1.96	0.0689 U	0.144 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Eu-154	pCi/g	0.0108	0.0492	0.0492	1.96	0.0407 U	0.0863 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Th-232	pCi/g	0.376	0.109	0.115	1.96	0.0683	0.162	30
160-43195-19	SAMP	FSS-136-082421	Soil	Ni-63	pCi/g	1.18	1.03	1.04	1.96	0.833	1.75 U	60
160-43195-20	SAMP	FSS-137-082421	Soil	Ni-63	pCi/g	1.96	1.00	1.02	1.96	0.791	1.66	60
160-43195-21	SAMP	FSS-138-082421	Soil	Ni-63	pCi/g	1.42	0.936	0.947	1.96	0.743	1.56 U	60
160-43195-19	SAMP	FSS-136-082421	Soil	Pu-241	pCi/g	0.710	1.84	1.84	1.96	1.23 U	2.73 U	30
160-43195-20	SAMP	FSS-137-082421	Soil	Pu-241	pCi/g	-0.549	1.35	1.35	1.96	1.15 U	2.48 U	30
160-43195-20 DU	QC_DUP	160-43195-20 DU	Soil	Pu-241	pCi/g	-0.5837	1.36	1.36	1.96	1.16 U	2.50 U	30
160-43195-21	SAMP	FSS-138-082421	Soil	Pu-241	pCi/g	-0.213	1.31	1.31	1.96	1.10 U	2.38 U	30
LCS 160-526537/2-A	QC_LCS	LCS 160-526537/2-A	Soil	Pu-241	pCi/g	17.22	2.66	3.06	1.96	1.35	2.90	30
MB 160-526537/1-A	QC_BLK	MB 160-526537/1-A	Soil	Pu-241	pCi/g	-0.5613	1.51	1.51	1.96	1.30 U	2.81 U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43220-1	SAMP	FSS-136-082521	Soil	Sr-90	pCi/g	0.266	0.182	0.183	1.96	0.132		0.289	U	200
160-43220-10	SAMP	FSS-349-082521	Soil	Sr-90	pCi/g	0.0383	0.135	0.135	1.96	0.110	U	0.242	U	200
160-43220-11	SAMP	FSS-150-082521	Soil	Sr-90	pCi/g	-0.171	0.149	0.149	1.96	0.138	U	0.298	U	200
160-43220-12	SAMP	FSS-350-082521	Soil	Sr-90	pCi/g	0.164	0.163	0.163	1.96	0.124		0.270	U	200
160-43220-13	SAMP	FSS-151-082521	Soil	Sr-90	pCi/g	0.365	0.205	0.207	1.96	0.148		0.320		200
160-43220-14	SAMP	FSS-152-082521	Soil	Sr-90	pCi/g	0.0976	0.154	0.154	1.96	0.121	U	0.266	U	200
160-43220-15	SAMP	FSS-088-081921	Soil	Sr-90	pCi/g	0.0643	0.154	0.154	1.96	0.124	U	0.271	U	200
160-43220-16	SAMP	FSS-089-081921	Soil	Sr-90	pCi/g	0.285	0.161	0.163	1.96	0.112		0.247		200
160-43220-17	SAMP	FSS-090-081921	Soil	Sr-90	pCi/g	0.0729	0.125	0.126	1.96	0.098	U	0.218	U	200
160-43220-2	SAMP	FSS-137-082521	Soil	Sr-90	pCi/g	0.265	0.200	0.201	1.96	0.148		0.322	U	200
160-43220-3	SAMP	FSS-138-082521	Soil	Sr-90	pCi/g	0.272	0.195	0.196	1.96	0.143		0.312	U	200
160-43220-4	SAMP	FSS-145-082521	Soil	Sr-90	pCi/g	0.480	0.207	0.211	1.96	0.136		0.299		200
160-43220-5	SAMP	FSS-146-082521	Soil	Sr-90	pCi/g	0.223	0.179	0.180	1.96	0.133		0.290	U	200
160-43220-5 DU	QC_DUP	160-43220-5 DU	Soil	Sr-90	pCi/g	0.2266	0.176	0.177	1.96	0.131		0.285	U	200
160-43220-6	SAMP	FSS-147-082521	Soil	Sr-90	pCi/g	-0.102	0.145	0.145	1.96	0.130	U	0.283	U	200
160-43220-7	SAMP	FSS-148-082521	Soil	Sr-90	pCi/g	0.0201	0.146	0.146	1.96	0.121	U	0.265	U	200
160-43220-8	SAMP	FSS-348-082521	Soil	Sr-90	pCi/g	0.149	0.175	0.175	1.96	0.136		0.295	U	200
160-43220-9	SAMP	FSS-149-082521	Soil	Sr-90	pCi/g	-0.0215	0.129	0.129	1.96	0.110	U	0.242	U	200
LCS 160-527652/2-A	QC_LCS	LCS 160-527652/2-A	Soil	Sr-90	pCi/g	7.087	0.477	0.743	1.96	0.120		0.262		200
LCS 160-527804/2-A	QC_LCS	LCS 160-527804/2-A	Soil	Sr-90	pCi/g	6.549	0.592	0.792	1.96	0.185		0.406		200
MB 160-527652/1-A	QC_BLK	MB 160-527652/1-A	Soil	Sr-90	pCi/g	0.01279	0.165	0.165	1.96	0.138	U	0.299	U	200
MB 160-527804/1-A	QC_BLK	MB 160-527804/1-A	Soil	Sr-90	pCi/g	0.1069	0.195	0.195	1.96	0.155	U	0.338	U	200
160-43220-1	SAMP	FSS-136-082521	Soil	H-3	pCi/g	0.158	0.189	0.189	1.96	0.144		0.324	U	20
160-43220-10	SAMP	FSS-349-082521	Soil	H-3	pCi/g	0.231	0.193	0.195	1.96	0.140		0.315	U	20
160-43220-11	SAMP	FSS-150-082521	Soil	H-3	pCi/g	0.115	0.183	0.183	1.96	0.143	U	0.321	U	20
160-43220-12	SAMP	FSS-350-082521	Soil	H-3	pCi/g	0.206	0.193	0.194	1.96	0.143		0.320	U	20
160-43220-13	SAMP	FSS-151-082521	Soil	H-3	pCi/g	0.161	0.185	0.185	1.96	0.140		0.313	U	20
160-43220-14	SAMP	FSS-152-082521	Soil	H-3	pCi/g	0.0992	0.176	0.176	1.96	0.138	U	0.309	U	20
160-43220-15	SAMP	FSS-088-081921	Soil	H-3	pCi/g	0.253	0.196	0.197	1.96	0.140		0.314	U	20
160-43220-16	SAMP	FSS-089-081921	Soil	H-3	pCi/g	0.233	0.196	0.197	1.96	0.144		0.322	U	20
160-43220-16 MS	QC_MS	160-43220-16 MS	Soil	H-3	pCi/g	7.983	0.606	0.917	1.96	0.139		0.311		20
160-43220-17	SAMP	FSS-090-081921	Soil	H-3	pCi/g	0.260	0.199	0.200	1.96	0.143		0.320	U	20
160-43220-17 DU	QC_DUP	160-43220-17 DU	Soil	H-3	pCi/g	0.2157	0.194	0.195	1.96	0.143		0.321	U	20
160-43220-2	SAMP	FSS-137-082521	Soil	H-3	pCi/g	0.205	0.190	0.191	1.96	0.140		0.314	U	20
160-43220-3	SAMP	FSS-138-082521	Soil	H-3	pCi/g	0.201	0.186	0.187	1.96	0.136		0.305	U	20
160-43220-4	SAMP	FSS-145-082521	Soil	H-3	pCi/g	0.173	0.185	0.186	1.96	0.138		0.309	U	20
160-43220-5	SAMP	FSS-146-082521	Soil	H-3	pCi/g	0.161	0.193	0.193	1.96	0.147		0.329	U	20
160-43220-6	SAMP	FSS-147-082521	Soil	H-3	pCi/g	0.215	0.199	0.200	1.96	0.146		0.327	U	20
160-43220-7	SAMP	FSS-148-082521	Soil	H-3	pCi/g	0.111	0.178	0.178	1.96	0.138	U	0.309	U	20
160-43220-8	SAMP	FSS-348-082521	Soil	H-3	pCi/g	0.279	0.198	0.199	1.96	0.140		0.313	U	20
160-43220-9	SAMP	FSS-149-082521	Soil	H-3	pCi/g	0.236	0.194	0.195	1.96	0.140		0.314	U	20
LCS 160-528868/2-A	QC_LCS	LCS 160-528868/2-A	Soil	H-3	pCi/g	6.604	0.529	0.778	1.96	0.127		0.284		20
MB 160-528868/1-A	QC_BLK	MB 160-528868/1-A	Soil	H-3	pCi/g	0.2583	0.190	0.192	1.96	0.135		0.302	U	20
160-43220-1	SAMP	FSS-136-082521	Soil	Pu-238	pCi/g	0.00	0.00421	0.00421	1.96	0.00789	U	0.0258	U	240
160-43220-1	SAMP	FSS-136-082521	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00421	0.00421	1.96	0.00790	U	0.0258	U	240
160-43220-10	SAMP	FSS-349-082521	Soil	Pu-238	pCi/g	0.00387	0.0161	0.0161	1.96	0.0101	U	0.0434	U	240
160-43220-10	SAMP	FSS-349-082521	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0170	0.0170	1.96	0.0143	U	0.0518	U	240
160-43220-11	SAMP	FSS-150-082521	Soil	Pu-238	pCi/g	0.0135	0.0274	0.0274	1.96	0.0158	U	0.0547	U	240
160-43220-11	SAMP	FSS-150-082521	Soil	Pu-239/Pu-240	pCi/g	0.0154	0.0213	0.0214	1.96	0.00708		0.0231	U	240
160-43220-12	SAMP	FSS-350-082521	Soil	Pu-238	pCi/g	-0.0136	0.0191	0.0191	1.96	0.0181	U	0.0420	U	960
160-43220-12	SAMP	FSS-350-082521	Soil	Pu-239/Pu-240	pCi/g	-0.0195	0.0143	0.0144	1.96	0.0157	U	0.0372	U	960
160-43220-13	SAMP	FSS-151-082521	Soil	Pu-238	pCi/g	-0.0286	0.0314	0.0315	1.96	0.0371	U	0.100	U	240
160-43220-13	SAMP	FSS-151-082521	Soil	Pu-239/Pu-240	pCi/g	0.00660	0.0326	0.0326	1.96	0.0243	U	0.075	U	240
160-43220-14	SAMP	FSS-152-082521	Soil	Pu-238	pCi/g	0.00397	0.0240	0.0240	1.96	0.0179	U	0.0595	U	240
160-43220-14	SAMP	FSS-152-082521	Soil	Pu-239/Pu-240	pCi/g	0.0377	0.0350	0.0352	1.96	0.00730		0.0384	U	240
160-43220-15	SAMP	FSS-088-081921	Soil	Pu-238	pCi/g	0.0210	0.0311	0.0312	1.96	0.0157		0.0544	U	240
160-43220-15	SAMP	FSS-088-081921	Soil	Pu-239/Pu-240	pCi/g	0.00957	0.0222	0.0222	1.96	0.0122	U	0.0474	U	240
160-43220-16	SAMP	FSS-089-081921	Soil	Pu-238	pCi/g	0.00567	0.00981	0.00982	1.96	0.00622	U	0.0181	U	960
160-43220-16	SAMP	FSS-089-081921	Soil	Pu-239/Pu-240	pCi/g	0.00757	0.00909	0.00911	1.96	0.00440		0.0145	U	960
160-43220-17	SAMP	FSS-090-081921	Soil	Pu-238	pCi/g	0.0121	0.0339	0.0339	1.96	0.0234	U	0.0709	U	240
160-43220-17	SAMP	FSS-090-081921	Soil	Pu-239/Pu-240	pCi/g	-0.00603	0.00683	0.00685	1.96	0.0128	U	0.0498	U	240
160-43220-2	SAMP	FSS-137-082521	Soil	Pu-238	pCi/g	0.00636	0.0171	0.0171	1.96	0.00780	U	0.0410	U	240

160-43220-2	SAMP	FSS-137-082521	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00416	0.00416	1.96	0.00780	U	0.0255	U	240
160-43220-3	SAMP	FSS-138-082521	Soil	Pu-238	pCi/g	0.0137	0.0220	0.0220	1.96	0.00718		0.0378	U	240
160-43220-3	SAMP	FSS-138-082521	Soil	Pu-239/Pu-240	pCi/g	-0.00586	0.00663	0.00665	1.96	0.0124	U	0.0483	U	240
160-43220-4	SAMP	FSS-145-082521	Soil	Pu-238	pCi/g	-0.00628	0.00711	0.00713	1.96	0.0133	U	0.0518	U	240
160-43220-4	SAMP	FSS-145-082521	Soil	Pu-239/Pu-240	pCi/g	0.00419	0.0174	0.0174	1.96	0.0109	U	0.0470	U	240
160-43220-5	SAMP	FSS-146-082521	Soil	Pu-238	pCi/g	-0.00195	0.00383	0.00383	1.96	0.00718	U	0.0378	U	240
160-43220-5	SAMP	FSS-146-082521	Soil	Pu-239/Pu-240	pCi/g	-0.00195	0.00383	0.00383	1.96	0.00719	U	0.0378	U	240
160-43220-6	SAMP	FSS-147-082521	Soil	Pu-238	pCi/g	0.0158	0.0279	0.0279	1.96	0.0145		0.0527	U	240
160-43220-6	SAMP	FSS-147-082521	Soil	Pu-239/Pu-240	pCi/g	0.00592	0.0159	0.0160	1.96	0.00726	U	0.0382	U	240
160-43220-7	SAMP	FSS-148-082521	Soil	Pu-238	pCi/g	0.0313	0.0391	0.0392	1.96	0.0204		0.0642	U	240
160-43220-7	SAMP	FSS-148-082521	Soil	Pu-239/Pu-240	pCi/g	0.00588	0.0158	0.0158	1.96	0.00720	U	0.0379	U	240
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	Pu-238	pCi/g	0.001997	0.00678	0.00678	1.96	0.00464	U	0.0153	U	960
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	Pu-239/Pu-240	pCi/g	0.005996	0.0104	0.0104	1.96	0.00658	U	0.0191	U	960
160-43220-8	SAMP	FSS-348-082521	Soil	Pu-238	pCi/g	-0.0238	0.0220	0.0221	1.96	0.02916	U	0.0821	U	240
160-43220-8	SAMP	FSS-348-082521	Soil	Pu-239/Pu-240	pCi/g	-0.0159	0.0206	0.0206	1.96	0.0253	U	0.0744	U	240
160-43220-9	SAMP	FSS-149-082521	Soil	Pu-238	pCi/g	0.0110	0.0209	0.0209	1.96	0.00950		0.0409	U	240
160-43220-9	SAMP	FSS-149-082521	Soil	Pu-239/Pu-240	pCi/g	0.00548	0.0148	0.0148	1.96	0.00672	U	0.0354	U	240
LCS 160-526439/2-A	QC_LCS	LCS 160-526439/2-A	Soil	Pu-238	pCi/g	5.349	0.380	0.581	1.96	0.0231		0.0672		240
LCS 160-526439/2-A	QC_LCS	LCS 160-526439/2-A	Soil	Pu-239/Pu-240	pCi/g	4.918	0.363	0.544	1.96	0.0111		0.0432		240
LCS 160-526442/2-A	QC_LCS	LCS 160-526442/2-A	Soil	Pu-238	pCi/g	4.891	0.377	0.551	1.96	0.0249		0.0723		240
LCS 160-526442/2-A	QC_LCS	LCS 160-526442/2-A	Soil	Pu-239/Pu-240	pCi/g	5.065	0.383	0.566	1.96	0.0120		0.0465		240
MB 160-526439/1-A	QC_BLK	MB 160-526439/1-A	Soil	Pu-238	pCi/g	-0.02059	0.0122	0.0123	1.96	0.0228	U	0.0681	U	240
MB 160-526439/1-A	QC_BLK	MB 160-526439/1-A	Soil	Pu-239/Pu-240	pCi/g	0.01124	0.0214	0.0214	1.96	0.0097		0.0420	U	240
MB 160-526442/1-A	QC_BLK	MB 160-526442/1-A	Soil	Pu-238	pCi/g	0.0098	0.0333	0.0333	1.96	0.0239	U	0.0713	U	240
MB 160-526442/1-A	QC_BLK	MB 160-526442/1-A	Soil	Pu-239/Pu-240	pCi/g	0.003924	0.0163	0.0163	1.96	0.0102	U	0.0440	U	240
160-43220-1	SAMP	FSS-136-082521	Soil	U-233/U-234	pCi/g	0.242	0.0905	0.0927	1.96	0.0136		0.0529		240
160-43220-1	SAMP	FSS-136-082521	Soil	U-235/U-236	pCi/g	0.0319	0.0361	0.0362	1.96	0.00978		0.0319		240
160-43220-1	SAMP	FSS-136-082521	Soil	U-238	pCi/g	0.186	0.0786	0.0800	1.96	0.00785		0.0413		240
160-43220-10	SAMP	FSS-349-082521	Soil	U-233/U-234	pCi/g	0.263	0.0947	0.0971	1.96	0.0270		0.0776		240
160-43220-10	SAMP	FSS-349-082521	Soil	U-235/U-236	pCi/g	-0.0122	0.0107	0.0107	1.96	0.0201	U	0.0695	U	240
160-43220-10	SAMP	FSS-349-082521	Soil	U-238	pCi/g	0.304	0.0960	0.0992	1.96	0.00720		0.0379		240
160-43220-11	SAMP	FSS-150-082521	Soil	U-233/U-234	pCi/g	0.278	0.0937	0.0965	1.96	0.0176		0.0587		240
160-43220-11	SAMP	FSS-150-082521	Soil	U-235/U-236	pCi/g	0.0170	0.0274	0.0274	1.96	0.00895		0.0471	U	240
160-43220-11	SAMP	FSS-150-082521	Soil	U-238	pCi/g	0.226	0.0841	0.0862	1.96	0.0144		0.0521		240
160-43220-12	SAMP	FSS-350-082521	Soil	U-233/U-234	pCi/g	0.311	0.0965	0.0998	1.96	0.0100		0.0430		240
160-43220-12	SAMP	FSS-350-082521	Soil	U-235/U-236	pCi/g	0.00955	0.0187	0.0187	1.96	0.00878		0.0287	U	240
160-43220-12	SAMP	FSS-350-082521	Soil	U-238	pCi/g	0.368	0.104	0.108	1.96	0.00704		0.0230		240
160-43220-13	SAMP	FSS-151-082521	Soil	U-233/U-234	pCi/g	0.309	0.101	0.104	1.96	0.0110		0.0474		240
160-43220-13	SAMP	FSS-151-082521	Soil	U-235/U-236	pCi/g	0.0105	0.0206	0.0207	1.96	0.00968		0.0316	U	240
160-43220-13	SAMP	FSS-151-082521	Soil	U-238	pCi/g	0.312	0.101	0.104	1.96	0.00776		0.0253		240
160-43220-14	SAMP	FSS-152-082521	Soil	U-233/U-234	pCi/g	0.284	0.0974	0.100	1.96	0.0211		0.0666		240
160-43220-14	SAMP	FSS-152-082521	Soil	U-235/U-236	pCi/g	0.0454	0.0448	0.045	1.96	0.0131		0.0566	U	240
160-43220-14	SAMP	FSS-152-082521	Soil	U-238	pCi/g	0.283	0.0972	0.100	1.96	0.0211		0.0664		240
160-43220-15	SAMP	FSS-088-081921	Soil	U-233/U-234	pCi/g	0.383	0.108	0.113	1.96	0.0208		0.0643		240
160-43220-15	SAMP	FSS-088-081921	Soil	U-235/U-236	pCi/g	0.0352	0.0371	0.0372	1.96	0.00864		0.0455	U	240
160-43220-15	SAMP	FSS-088-081921	Soil	U-238	pCi/g	0.356	0.103	0.107	1.96	0.0120		0.0466		240
160-43220-16	SAMP	FSS-089-081921	Soil	U-233/U-234	pCi/g	0.188	0.0746	0.0762	1.96	0.00699		0.0368		240
160-43220-16	SAMP	FSS-089-081921	Soil	U-235/U-236	pCi/g	0.0071	0.0191	0.0191	1.96	0.00870	U	0.0458	U	240
160-43220-16	SAMP	FSS-089-081921	Soil	U-238	pCi/g	0.150	0.0687	0.0697	1.96	0.0156		0.0540		240
160-43220-17	SAMP	FSS-090-081921	Soil	U-233/U-234	pCi/g	0.135	0.107	0.108	1.96	0.0711		0.167	U	240
160-43220-17	SAMP	FSS-090-081921	Soil	U-235/U-236	pCi/g	0.0258	0.053	0.0531	1.96	0.0355	U	0.102	U	240
160-43220-17	SAMP	FSS-090-081921	Soil	U-238	pCi/g	0.203	0.0871	0.0887	1.96	0.0285		0.0818		240
160-43220-2	SAMP	FSS-137-082521	Soil	U-233/U-234	pCi/g	0.278	0.0959	0.0986	1.96	0.0133		0.0518		240
160-43220-2	SAMP	FSS-137-082521	Soil	U-235/U-236	pCi/g	0.0182	0.0293	0.0294	1.96	0.00958		0.0504	U	240
160-43220-2	SAMP	FSS-137-082521	Soil	U-238	pCi/g	0.330	0.104	0.107	1.96	0.0109		0.0468		240
160-43220-3	SAMP	FSS-138-082521	Soil	U-233/U-234	pCi/g	0.194	0.0825	0.084	1.96	0.0260		0.0755		240
160-43220-3	SAMP	FSS-138-082521	Soil	U-235/U-236	pCi/g	0.00244	0.0208	0.0208	1.96	0.0155	U	0.0603	U	240
160-43220-3	SAMP	FSS-138-082521	Soil	U-238	pCi/g	0.299	0.0975	0.101	1.96	0.0190		0.0615		240
160-43220-4	SAMP	FSS-145-082521	Soil	U-233/U-234	pCi/g	0.260	0.0919	0.0944	1.96	0.0150		0.0543		240
160-43220-4	SAMP	FSS-145-082521	Soil	U-235/U-236	pCi/g	0.0582	0.0488	0.0491	1.96	0.00930		0.0490		240
160-43220-4	SAMP	FSS-145-082521	Soil	U-238	pCi/g	0.258	0.0918	0.0942	1.96	0.0167		0.0577		240
160-43220-5	SAMP	FSS-146-082521	Soil	U-233/U-234	pCi/g	0.251	0.0902	0.0926	1.96	0.0179		0.0598		240
160-43220-5	SAMP	FSS-146-082521	Soil	U-235/U-236	pCi/g	0.00744	0.0200	0.0200	1.96	0.00912	U	0.0480	U	240

160-43220-5	SAMP	FSS-146-082521	Soil	U-238	pCi/g	0.157	0.0719	0.0731	1.96	0.0164		0.0566		240
160-43220-6	SAMP	FSS-147-082521	Soil	U-233/U-234	pCi/g	0.208	0.0917	0.0933	1.96	0.0305		0.0876		240
160-43220-6	SAMP	FSS-147-082521	Soil	U-235/U-236	pCi/g	-0.00276	0.0248	0.0248	1.96	0.0227	U	0.0785	U	240
160-43220-6	SAMP	FSS-147-082521	Soil	U-238	pCi/g	0.166	0.0757	0.0769	1.96	0.00814		0.0428		240
160-43220-7	SAMP	FSS-148-082521	Soil	U-233/U-234	pCi/g	0.212	0.0853	0.0871	1.96	0.0212		0.0669		240
160-43220-7	SAMP	FSS-148-082521	Soil	U-235/U-236	pCi/g	0.0558	0.0492	0.0494	1.96	0.0132		0.0568	U	240
160-43220-7	SAMP	FSS-148-082521	Soil	U-238	pCi/g	0.313	0.0998	0.103	1.96	0.0106		0.0456		240
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	U-233/U-234	pCi/g	0.2148	0.0821	0.084	1.96	0.0159		0.0550		240
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	U-235/U-236	pCi/g	0.0313	0.0386	0.0387	1.96	0.0153		0.0596	U	240
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	U-238	pCi/g	0.1873	0.0760	0.0775	1.96	0.0123		0.0478		240
160-43220-8	SAMP	FSS-348-082521	Soil	U-233/U-234	pCi/g	0.263	0.0901	0.0926	1.96	0.0142		0.0517		240
160-43220-8	SAMP	FSS-348-082521	Soil	U-235/U-236	pCi/g	0.0265	0.0330	0.0331	1.96	0.00886		0.0466	U	240
160-43220-8	SAMP	FSS-348-082521	Soil	U-238	pCi/g	0.322	0.0996	0.103	1.96	0.0159		0.0549		240
160-43220-9	SAMP	FSS-149-082521	Soil	U-233/U-234	pCi/g	0.383	0.112	0.117	1.96	0.0186		0.0618		240
160-43220-9	SAMP	FSS-149-082521	Soil	U-235/U-236	pCi/g	0.00769	0.0207	0.0207	1.96	0.00943	U	0.0496	U	240
160-43220-9	SAMP	FSS-149-082521	Soil	U-238	pCi/g	0.343	0.106	0.110	1.96	0.0169		0.0585		240
LCS 160-526534/2-A	QC_LCS	LCS 160-526534/2-A	Soil	U-233/U-234	pCi/g	6.64	0.452	0.709	1.96	0.00736		0.0387		240
LCS 160-526534/2-A	QC_LCS	LCS 160-526534/2-A	Soil	U-238	pCi/g	6.719	0.454	0.716	1.96	0.0127		0.0494		240
LCS 160-526536/2-A	QC_LCS	LCS 160-526536/2-A	Soil	U-233/U-234	pCi/g	7.112	0.468	0.749	1.96	0.0127		0.0495		240
LCS 160-526536/2-A	QC_LCS	LCS 160-526536/2-A	Soil	U-238	pCi/g	6.848	0.458	0.726	1.96	0.00734		0.0239		240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-233/U-234	pCi/g	0.01009	0.0343	0.0343	1.96	0.0246	U	0.0735	U	240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-235/U-236	pCi/g	0.007533	0.0203	0.0203	1.96	0.0092	U	0.0486	U	240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-238	pCi/g	0.01208	0.0230	0.0230	1.96	0.0105		0.0451	U	240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-233/U-234	pCi/g	0.02787	0.0317	0.0318	1.96	0.0104		0.0446	U	240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-235/U-236	pCi/g	-0.002477	0.00485	0.00486	1.96	0.00911	U	0.0479	U	240
MB 160-526536/1-A	QC_BLK	MB 160-526536/1-A	Soil	U-238	pCi/g	0.03973	0.0348	0.035	1.96	0.00731		0.0238		240
160-43220-1	SAMP	FSS-136-082521	Soil	C-14	pCi/g	-0.0501	0.885	0.885	1.96	0.737	U	1.56	U	20
160-43220-1 DU	QC_DUP	160-43220-1 DU	Soil	C-14	pCi/g	0.4195	0.960	0.961	1.96	0.775	U	1.64	U	20
160-43220-1 MS	QC_MS	160-43220-1 MS	Soil	C-14	pCi/g	66.52	2.53	7.48	1.96	0.606		1.28		20
160-43220-10	SAMP	FSS-349-082521	Soil	C-14	pCi/g	-0.0113	0.791	0.791	1.96	0.655	U	1.38	U	20
160-43220-11	SAMP	FSS-150-082521	Soil	C-14	pCi/g	-0.102	0.870	0.870	1.96	0.729	U	1.54	U	20
160-43220-12	SAMP	FSS-350-082521	Soil	C-14	pCi/g	0.399	0.805	0.806	1.96	0.649	U	1.37	U	20
160-43220-13	SAMP	FSS-151-082521	Soil	C-14	pCi/g	0.365	0.928	0.929	1.96	0.751	U	1.59	U	20
160-43220-14	SAMP	FSS-152-082521	Soil	C-14	pCi/g	-0.384	0.615	0.616	1.96	0.528	U	1.12	U	20
160-43220-15	SAMP	FSS-088-081921	Soil	C-14	pCi/g	0.0445	0.595	0.595	1.96	0.492	U	1.04	U	20
160-43220-16	SAMP	FSS-089-081921	Soil	C-14	pCi/g	0.0959	0.909	0.909	1.96	0.754	U	1.59	U	20
160-43220-17	SAMP	FSS-090-081921	Soil	C-14	pCi/g	0.167	0.921	0.921	1.96	0.756	U	1.60	U	20
160-43220-2	SAMP	FSS-137-082521	Soil	C-14	pCi/g	0.203	0.736	0.736	1.96	0.601	U	1.27	U	20
160-43220-3	SAMP	FSS-138-082521	Soil	C-14	pCi/g	-0.0365	0.657	0.657	1.96	0.550	U	1.16	U	20
160-43220-4	SAMP	FSS-145-082521	Soil	C-14	pCi/g	-0.428	0.774	0.775	1.96	0.666	U	1.41	U	20
160-43220-5	SAMP	FSS-146-082521	Soil	C-14	pCi/g	-0.157	0.841	0.841	1.96	0.705	U	1.49	U	20
160-43220-6	SAMP	FSS-147-082521	Soil	C-14	pCi/g	0.468	0.931	0.932	1.96	0.746	U	1.58	U	20
160-43220-7	SAMP	FSS-148-082521	Soil	C-14	pCi/g	0.201	0.783	0.783	1.96	0.637	U	1.35	U	20
160-43220-8	SAMP	FSS-348-082521	Soil	C-14	pCi/g	0.0525	0.926	0.926	1.96	0.764	U	1.62	U	20
160-43220-9	SAMP	FSS-149-082521	Soil	C-14	pCi/g	-0.202	0.819	0.820	1.96	0.688	U	1.45	U	20
LCS 160-530072/2-A	QC_LCS	LCS 160-530072/2-A	Soil	C-14	pCi/g	81.98	3.27	9.27	1.96	0.815		1.72		20
MB 160-530072/1-A	QC_BLK	MB 160-530072/1-A	Soil	C-14	pCi/g	-0.2297	0.957	0.958	1.96	0.81	U	1.71	U	20
160-43220-1	SAMP	FSS-136-082521	Soil	Cs-137	pCi/g	0.101	0.0439	0.0451	1.96	0.0256		0.0582		30
160-43220-1	SAMP	FSS-136-082521	Soil	Co-60	pCi/g	0.0413	0.0244	0.0247	1.96	0.0087		0.0277		30
160-43220-1	SAMP	FSS-136-082521	Soil	K-40	pCi/g	3.82	0.801	0.887	1.96	0.2381		0.579		30
160-43220-1	SAMP	FSS-136-082521	Soil	Na-22	pCi/g	-0.00846	0.0355	0.0355	1.96	0.0284	U	0.0667	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Zn-65	pCi/g	0.00	0.0178	0.0178	1.96	0.0995	U	0.216	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Ra-226	pCi/g	0.0597	0.0648	0.0651	1.96	0.126	U	0.264	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Ac-228	pCi/g	0.185	0.153	0.155	1.96	0.0909		0.208	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Eu-155	pCi/g	-0.00288	0.007	0.007	1.96	0.179	U	0.367	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Am-241	pCi/g	-0.0440	0.130	0.130	1.96	0.108	U	0.224	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Eu-152	pCi/g	0.234	0.0733	0.0772	1.96	0.0671		0.141		30
160-43220-1	SAMP	FSS-136-082521	Soil	Bi-214	pCi/g	0.0597	0.0648	0.0651	1.96	0.126	U	0.264	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Bi-212	pCi/g	-0.401	0.761	0.762	1.96	0.613	U	1.31	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Pb-214	pCi/g	0.351	0.0916	0.0983	1.96	0.0359		0.0818		30
160-43220-1	SAMP	FSS-136-082521	Soil	Pb-212	pCi/g	0.298	0.0675	0.0773	1.96	0.0350		0.0766		30
160-43220-1	SAMP	FSS-136-082521	Soil	Eu-154	pCi/g	0.0441	0.0626	0.0628	1.96	0.0471	U	0.0991	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Th-232	pCi/g	0.185	0.153	0.155	1.96	0.0909		0.208	U	30

160-43220-10	SAMP	FSS-349-082521	Soil	Cs-137	pCi/g	0.0159	0.0411	0.0412	1.96	0.0331	U	0.0724	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Co-60	pCi/g	0.00297	0.0144	0.0144	1.96	0.0262	U	0.0614	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	K-40	pCi/g	4.51	0.764	0.888	1.96	0.0785		0.248		30
160-43220-10	SAMP	FSS-349-082521	Soil	Na-22	pCi/g	0.00752	0.0234	0.0234	1.96	0.0179	U	0.0445	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Zn-65	pCi/g	0.00	0.0420	0.0420	1.96	0.0905	U	0.197	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Ra-226	pCi/g	0.267	0.0785	0.0831	1.96	0.0422		0.0952		30
160-43220-10	SAMP	FSS-349-082521	Soil	Ac-228	pCi/g	0.422	0.106	0.114	1.96	0.0199		0.0629		30
160-43220-10	SAMP	FSS-349-082521	Soil	Eu-155	pCi/g	-0.00338	0.202	0.202	1.96	0.169	U	0.347	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Am-241	pCi/g	0.0441	0.101	0.101	1.96	0.0830	U	0.173	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Eu-152	pCi/g	0.0207	0.0611	0.0612	1.96	0.0622	U	0.131	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Bi-214	pCi/g	0.267	0.0785	0.0831	1.96	0.0422		0.0952		30
160-43220-10	SAMP	FSS-349-082521	Soil	Bi-212	pCi/g	0.156	0.257	0.258	1.96	0.187	U	0.449	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Pb-214	pCi/g	0.324	0.0611	0.0694	1.96	0.0347		0.0782		30
160-43220-10	SAMP	FSS-349-082521	Soil	Pb-212	pCi/g	0.415	0.0664	0.0848	1.96	0.0262		0.0582		30
160-43220-10	SAMP	FSS-349-082521	Soil	Eu-154	pCi/g	0.00685	0.0141	0.0141	1.96	0.0430	U	0.0903	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Th-232	pCi/g	0.422	0.106	0.114	1.96	0.0199		0.0629		30
160-43220-11	SAMP	FSS-150-082521	Soil	Cs-137	pCi/g	0.0258	0.0484	0.0485	1.96	0.0385	U	0.0837	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Co-60	pCi/g	-0.00115	0.00678	0.00678	1.96	0.0282	U	0.0661	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	K-40	pCi/g	3.83	0.783	0.872	1.96	0.2279		0.554		30
160-43220-11	SAMP	FSS-150-082521	Soil	Na-22	pCi/g	0.0242	0.0296	0.0297	1.96	0.0198		0.049	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Zn-65	pCi/g	0.00	0.0342	0.0342	1.96	0.0888	U	0.194	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Ra-226	pCi/g	0.501	0.111	0.122	1.96	0.0394		0.0904		30
160-43220-11	SAMP	FSS-150-082521	Soil	Ac-228	pCi/g	0.219	0.0914	0.094	1.96	0.120		0.265	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Eu-155	pCi/g	0.0683	0.137	0.137	1.96	0.112	U	0.234	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Am-241	pCi/g	0.0373	0.122	0.122	1.96	0.101	U	0.211	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Eu-152	pCi/g	-0.0424	0.0812	0.0814	1.96	0.0662	U	0.139	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Bi-214	pCi/g	0.501	0.111	0.122	1.96	0.0394		0.0904		30
160-43220-11	SAMP	FSS-150-082521	Soil	Bi-212	pCi/g	0.286	0.439	0.44	1.96	0.3360	U	0.752	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Pb-214	pCi/g	0.506	0.0883	0.102	1.96	0.0367		0.0830		30
160-43220-11	SAMP	FSS-150-082521	Soil	Pb-212	pCi/g	0.326	0.0653	0.0773	1.96	0.0305		0.0674		30
160-43220-11	SAMP	FSS-150-082521	Soil	Eu-154	pCi/g	0.0599	0.0875	0.0877	1.96	0.0403		0.0854	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Th-232	pCi/g	0.219	0.0914	0.094	1.96	0.120		0.265	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Cs-137	pCi/g	0.0203	0.0369	0.0369	1.96	0.0283	U	0.0645	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Co-60	pCi/g	0.0117	0.0487	0.0487	1.96	0.0243	U	0.06	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	K-40	pCi/g	4.39	0.909	1.01	1.96	0.279		0.673		30
160-43220-12	SAMP	FSS-350-082521	Soil	Na-22	pCi/g	-0.0176	0.0413	0.0413	1.96	0.0318	U	0.0745	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Zn-65	pCi/g	-0.0734	0.139	0.139	1.96	0.110	U	0.241	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Ra-226	pCi/g	0.399	0.108	0.116	1.96	0.0379		0.0894		30
160-43220-12	SAMP	FSS-350-082521	Soil	Ac-228	pCi/g	0.438	0.127	0.134	1.96	0.0611		0.152		30
160-43220-12	SAMP	FSS-350-082521	Soil	Eu-155	pCi/g	0.00	0.0594	0.0594	1.96	0.145	U	0.300	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Am-241	pCi/g	-0.0421	0.131	0.131	1.96	0.0861	U	0.181	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Eu-152	pCi/g	0.00595	0.0117	0.0117	1.96	0.0666	U	0.141	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Bi-214	pCi/g	0.399	0.108	0.116	1.96	0.0379		0.0894		30
160-43220-12	SAMP	FSS-350-082521	Soil	Bi-212	pCi/g	0.181	0.527	0.528	1.96	0.4233	U	0.941	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Pb-214	pCi/g	0.338	0.0897	0.0961	1.96	0.0357		0.0826		30
160-43220-12	SAMP	FSS-350-082521	Soil	Pb-212	pCi/g	0.376	0.0818	0.0947	1.96	0.0432		0.0938		30
160-43220-12	SAMP	FSS-350-082521	Soil	Eu-154	pCi/g	0.0727	0.108	0.108	1.96	0.0510		0.107	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Th-232	pCi/g	0.438	0.127	0.134	1.96	0.0611		0.152		30
160-43220-13	SAMP	FSS-151-082521	Soil	Cs-137	pCi/g	0.450	0.0673	0.0815	1.96	0.0118		0.0297		30
160-43220-13	SAMP	FSS-151-082521	Soil	Co-60	pCi/g	0.0236	0.0175	0.0176	1.96	0.0078		0.0248	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	K-40	pCi/g	4.38	0.756	0.875	1.96	0.0791		0.250		30
160-43220-13	SAMP	FSS-151-082521	Soil	Na-22	pCi/g	-0.0065	0.0382	0.0382	1.96	0.0312	U	0.0713	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Zn-65	pCi/g	0.00	0.0620	0.0620	1.96	0.0620	U	0.140	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Ra-226	pCi/g	0.367	0.0776	0.0861	1.96	0.00929		0.0294		30
160-43220-13	SAMP	FSS-151-082521	Soil	Ac-228	pCi/g	0.387	0.113	0.120	1.96	0.0200		0.0634		30
160-43220-13	SAMP	FSS-151-082521	Soil	Eu-155	pCi/g	0.00	0.0754	0.0754	1.96	0.218	U	0.445	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Am-241	pCi/g	0.0371	0.119	0.119	1.96	0.0990	U	0.205	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Eu-152	pCi/g	0.0467	0.0431	0.0434	1.96	0.0724	U	0.151	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Bi-214	pCi/g	0.367	0.0776	0.0861	1.96	0.00929		0.0294		30
160-43220-13	SAMP	FSS-151-082521	Soil	Bi-212	pCi/g	0.131	0.767	0.767	1.96	0.637	U	1.35	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Pb-214	pCi/g	0.387	0.103	0.110	1.96	0.0389		0.0868		30
160-43220-13	SAMP	FSS-151-082521	Soil	Pb-212	pCi/g	0.413	0.0665	0.0846	1.96	0.0264		0.0586		30
160-43220-13	SAMP	FSS-151-082521	Soil	Eu-154	pCi/g	0.0488	0.0833	0.0834	1.96	0.0497	U	0.104	U	30

160-43220-13	SAMP	FSS-151-082521	Soil	Th-232	pCi/g	0.387	0.113	0.120	1.96	0.0200		0.0634		30
160-43220-14	SAMP	FSS-152-082521	Soil	Cs-137	pCi/g	0.537	0.0787	0.0958	1.96	0.0070		0.0221		30
160-43220-14	SAMP	FSS-152-082521	Soil	Co-60	pCi/g	-0.0488	0.0374	0.0377	1.96	0.0489	U	0.110	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	K-40	pCi/g	3.64	0.997	1.06	1.96	0.383		0.885		30
160-43220-14	SAMP	FSS-152-082521	Soil	Na-22	pCi/g	0.0252	0.0202	0.0204	1.96	0.0098		0.031	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Zn-65	pCi/g	0.0187	0.145	0.145	1.96	0.120	U	0.261	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Ra-226	pCi/g	0.296	0.0955	0.100	1.96	0.0371		0.0884		30
160-43220-14	SAMP	FSS-152-082521	Soil	Ac-228	pCi/g	0.385	0.172	0.176	1.96	0.132		0.295		30
160-43220-14	SAMP	FSS-152-082521	Soil	Eu-155	pCi/g	0.00	0.0801	0.0801	1.96	0.165	U	0.342	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Am-241	pCi/g	-0.0449	0.133	0.133	1.96	0.0871	U	0.183	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Eu-152	pCi/g	0.138	0.0995	0.100	1.96	0.0812		0.170	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Bi-214	pCi/g	0.296	0.0955	0.100	1.96	0.0371		0.0884		30
160-43220-14	SAMP	FSS-152-082521	Soil	Bi-212	pCi/g	-0.242	0.733	0.733	1.96	0.596	U	1.29	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Pb-214	pCi/g	0.290	0.101	0.105	1.96	0.0500		0.112		30
160-43220-14	SAMP	FSS-152-082521	Soil	Pb-212	pCi/g	0.412	0.0887	0.103	1.96	0.0480		0.104		30
160-43220-14	SAMP	FSS-152-082521	Soil	Eu-154	pCi/g	0.0578	0.093	0.0932	1.96	0.0564		0.118	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Th-232	pCi/g	0.385	0.172	0.176	1.96	0.132		0.295		30
160-43220-15	SAMP	FSS-088-081921	Soil	Cs-137	pCi/g	0.149	0.0455	0.0479	1.96	0.00845		0.0267		30
160-43220-15	SAMP	FSS-088-081921	Soil	Co-60	pCi/g	0.00	0.0203	0.0203	1.96	0.0120	U	0.0381	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	K-40	pCi/g	6.98	1.18	1.37	1.96	0.121		0.384		30
160-43220-15	SAMP	FSS-088-081921	Soil	Na-22	pCi/g	0.0344	0.0418	0.0419	1.96	0.0277		0.069	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Zn-65	pCi/g	0.033	0.142	0.142	1.96	0.116	U	0.257	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Ra-226	pCi/g	0.371	0.122	0.127	1.96	0.0536		0.124		30
160-43220-15	SAMP	FSS-088-081921	Soil	Ac-228	pCi/g	0.301	0.157	0.160	1.96	0.140		0.316	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Eu-155	pCi/g	-0.0883	0.357	0.357	1.96	0.298	U	0.609	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Am-241	pCi/g	-0.0247	0.181	0.181	1.96	0.151	U	0.313	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Eu-152	pCi/g	0.0744	0.0829	0.0832	1.96	0.0907	U	0.191	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Bi-214	pCi/g	0.371	0.122	0.127	1.96	0.0536		0.124		30
160-43220-15	SAMP	FSS-088-081921	Soil	Bi-212	pCi/g	0.00	0.619	0.619	1.96	0.621	U	1.36	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Pb-214	pCi/g	0.502	0.131	0.140	1.96	0.0603		0.134		30
160-43220-15	SAMP	FSS-088-081921	Soil	Pb-212	pCi/g	0.391	0.0898	0.0983	1.96	0.0455		0.0999		30
160-43220-15	SAMP	FSS-088-081921	Soil	Eu-154	pCi/g	0.0334	0.0801	0.0801	1.96	0.0665	U	0.140	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Th-232	pCi/g	0.301	0.157	0.160	1.96	0.140		0.316	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Cs-137	pCi/g	-0.0323	0.0547	0.0548	1.96	0.0432	U	0.0941	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Co-60	pCi/g	0.02	0.0209	0.0210	1.96	0.00964		0.0305	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	K-40	pCi/g	3.04	1.03	1.08	1.96	0.4346		0.982		30
160-43220-16	SAMP	FSS-089-081921	Soil	Na-22	pCi/g	-0.0614	0.0665	0.0668	1.96	0.0496	U	0.110	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Zn-65	pCi/g	0.00	0.014	0.0140	1.96	0.101	U	0.221	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Ra-226	pCi/g	0.0765	0.0735	0.0739	1.96	0.0949	U	0.203	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Ac-228	pCi/g	0.352	0.121	0.126	1.96	0.0248		0.0784		30
160-43220-16	SAMP	FSS-089-081921	Soil	Eu-155	pCi/g	0.00	0.0679	0.0679	1.96	0.131	U	0.271	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Am-241	pCi/g	-0.0309	0.122	0.122	1.96	0.0804	U	0.170	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Eu-152	pCi/g	0.0699	0.138	0.139	1.96	0.0645		0.137	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Bi-214	pCi/g	0.0765	0.0735	0.0739	1.96	0.0949	U	0.203	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Bi-212	pCi/g	-0.299	0.734	0.735	1.96	0.594	U	1.28	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Pb-214	pCi/g	0.112	0.0634	0.0645	1.96	0.0820		0.175	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Pb-212	pCi/g	0.371	0.0742	0.0879	1.96	0.0332		0.0738		30
160-43220-16	SAMP	FSS-089-081921	Soil	Eu-154	pCi/g	0.0407	0.0715	0.0716	1.96	0.0435	U	0.0924	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Th-232	pCi/g	0.352	0.121	0.126	1.96	0.0248		0.0784		30
160-43220-17	SAMP	FSS-090-081921	Soil	Cs-137	pCi/g	-0.0419	0.0705	0.0706	1.96	0.0561	U	0.121	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Co-60	pCi/g	0.00990	0.0336	0.0336	1.96	0.0376	U	0.0879	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	K-40	pCi/g	4.62	0.989	1.09	1.96	0.312		0.752		30
160-43220-17	SAMP	FSS-090-081921	Soil	Na-22	pCi/g	-0.00603	0.0434	0.0435	1.96	0.0355	U	0.0832	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Zn-65	pCi/g	0.00	0.0547	0.0547	1.96	0.0976	U	0.217	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Ra-226	pCi/g	0.337	0.119	0.124	1.96	0.0489		0.113		30
160-43220-17	SAMP	FSS-090-081921	Soil	Ac-228	pCi/g	0.280	0.118	0.121	1.96	0.0281		0.0888		30
160-43220-17	SAMP	FSS-090-081921	Soil	Eu-155	pCi/g	0.0579	0.179	0.179	1.96	0.149	U	0.309	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Am-241	pCi/g	0.0386	0.124	0.124	1.96	0.0815	U	0.173	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Eu-152	pCi/g	0.207	0.091	0.0935	1.96	0.0657		0.140		30
160-43220-17	SAMP	FSS-090-081921	Soil	Bi-214	pCi/g	0.337	0.119	0.124	1.96	0.0489		0.113		30
160-43220-17	SAMP	FSS-090-081921	Soil	Bi-212	pCi/g	-0.453	0.765	0.767	1.96	0.605	U	1.32	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Pb-214	pCi/g	0.377	0.0975	0.105	1.96	0.0492		0.111		30
160-43220-17	SAMP	FSS-090-081921	Soil	Pb-212	pCi/g	0.350	0.0824	0.0936	1.96	0.0425		0.0934		30

160-43220-17	SAMP	FSS-090-081921	Soil	Eu-154	pCi/g	0.0386	0.0909	0.0909	1.96	0.0499	U	0.106	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Th-232	pCi/g	0.280	0.118	0.121	1.96	0.0281		0.0888		30
160-43220-2	SAMP	FSS-137-082521	Soil	Cs-137	pCi/g	0.0291	0.0610	0.0611	1.96	0.0486	U	0.107	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Co-60	pCi/g	0.0143	0.0109	0.011	1.96	0.0276	U	0.0688	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	K-40	pCi/g	3.02	0.865	0.916	1.96	0.331		0.799		30
160-43220-2	SAMP	FSS-137-082521	Soil	Na-22	pCi/g	0.00	0.00946	0.00946	1.96	0.0112	U	0.0356	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Zn-65	pCi/g	0.0516	0.107	0.107	1.96	0.0826	U	0.189	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Ra-226	pCi/g	0.241	0.108	0.111	1.96	0.0519		0.120		30
160-43220-2	SAMP	FSS-137-082521	Soil	Ac-228	pCi/g	0.138	0.123	0.124	1.96	0.0862		0.207	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Eu-155	pCi/g	0.0313	0.0973	0.0973	1.96	0.173	U	0.358	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Am-241	pCi/g	-0.0479	0.15	0.150	1.96	0.124	U	0.258	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Eu-152	pCi/g	0.0779	0.141	0.141	1.96	0.0766		0.163	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Bi-214	pCi/g	0.241	0.108	0.111	1.96	0.0519		0.120		30
160-43220-2	SAMP	FSS-137-082521	Soil	Bi-212	pCi/g	0.211	0.395	0.396	1.96	0.294	U	0.702	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Pb-214	pCi/g	0.258	0.0854	0.0893	1.96	0.0537		0.121		30
160-43220-2	SAMP	FSS-137-082521	Soil	Pb-212	pCi/g	0.257	0.0696	0.0769	1.96	0.0333		0.0755		30
160-43220-2	SAMP	FSS-137-082521	Soil	Eu-154	pCi/g	0.0283	0.0423	0.0424	1.96	0.0603	U	0.127	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Th-232	pCi/g	0.138	0.123	0.124	1.96	0.0862		0.207	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Cs-137	pCi/g	-0.000509	0.0634	0.0634	1.96	0.0369	U	0.082	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Co-60	pCi/g	-0.00876	0.019	0.0191	1.96	0.0342	U	0.0804	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	K-40	pCi/g	3.17	0.82	0.879	1.96	0.294		0.708		30
160-43220-3	SAMP	FSS-138-082521	Soil	Na-22	pCi/g	0.0243	0.0339	0.034	1.96	0.0230		0.0577	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Zn-65	pCi/g	0.00	0.0212	0.0212	1.96	0.0907	U	0.202	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Ra-226	pCi/g	0.288	0.109	0.113	1.96	0.0508		0.116		30
160-43220-3	SAMP	FSS-138-082521	Soil	Ac-228	pCi/g	0.309	0.196	0.198	1.96	0.0956		0.222		30
160-43220-3	SAMP	FSS-138-082521	Soil	Eu-155	pCi/g	-0.0714	0.127	0.127	1.96	0.168	U	0.347	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Am-241	pCi/g	0.0594	0.153	0.153	1.96	0.126	U	0.263	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Eu-152	pCi/g	0.065	0.128	0.128	1.96	0.0716	U	0.152	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Bi-214	pCi/g	0.288	0.109	0.113	1.96	0.0508		0.116		30
160-43220-3	SAMP	FSS-138-082521	Soil	Bi-212	pCi/g	0.323	0.601	0.602	1.96	0.472	U	1.04	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Pb-214	pCi/g	0.236	0.0862	0.0895	1.96	0.0484		0.109		30
160-43220-3	SAMP	FSS-138-082521	Soil	Pb-212	pCi/g	0.273	0.0718	0.0797	1.96	0.0383		0.0845		30
160-43220-3	SAMP	FSS-138-082521	Soil	Eu-154	pCi/g	0.0485	0.103	0.103	1.96	0.0509	U	0.108	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Th-232	pCi/g	0.309	0.196	0.198	1.96	0.0956		0.222		30
160-43220-4	SAMP	FSS-145-082521	Soil	Cs-137	pCi/g	0.537	0.0849	0.101	1.96	0.0146		0.0376		30
160-43220-4	SAMP	FSS-145-082521	Soil	Co-60	pCi/g	-0.0135	0.0497	0.0497	1.96	0.0350	U	0.0822	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	K-40	pCi/g	5.06	1.01	1.13	1.96	0.300		0.724		30
160-43220-4	SAMP	FSS-145-082521	Soil	Na-22	pCi/g	0.0482	0.0285	0.0288	1.96	0.0102		0.0323		30
160-43220-4	SAMP	FSS-145-082521	Soil	Zn-65	pCi/g	-0.115	0.187	0.188	1.96	0.149	U	0.320	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Ra-226	pCi/g	0.368	0.111	0.117	1.96	0.0462		0.107		30
160-43220-4	SAMP	FSS-145-082521	Soil	Ac-228	pCi/g	0.516	0.157	0.165	1.96	0.0516		0.135		30
160-43220-4	SAMP	FSS-145-082521	Soil	Eu-155	pCi/g	0.0135	0.0324	0.0325	1.96	0.196	U	0.404	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Am-241	pCi/g	0.068	0.152	0.152	1.96	0.125	U	0.260	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Eu-152	pCi/g	0.0551	0.0891	0.0893	1.96	0.0655	U	0.139	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Bi-214	pCi/g	0.368	0.111	0.117	1.96	0.0462		0.107		30
160-43220-4	SAMP	FSS-145-082521	Soil	Bi-212	pCi/g	0.382	0.627	0.628	1.96	0.488	U	1.08	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Pb-214	pCi/g	0.383	0.110	0.116	1.96	0.0607		0.134		30
160-43220-4	SAMP	FSS-145-082521	Soil	Pb-212	pCi/g	0.416	0.0809	0.0966	1.96	0.0353		0.0786		30
160-43220-4	SAMP	FSS-145-082521	Soil	Eu-154	pCi/g	0.060	0.092	0.0922	1.96	0.0511		0.108	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Th-232	pCi/g	0.516	0.157	0.165	1.96	0.0516		0.135		30
160-43220-5	SAMP	FSS-146-082521	Soil	Cs-137	pCi/g	0.208	0.0576	0.0614	1.96	0.0300		0.0669		30
160-43220-5	SAMP	FSS-146-082521	Soil	Co-60	pCi/g	-0.0595	0.096	0.0962	1.96	0.0464	U	0.103	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	K-40	pCi/g	4.25	0.837	0.94	1.96	0.237		0.576		30
160-43220-5	SAMP	FSS-146-082521	Soil	Na-22	pCi/g	0.0132	0.0377	0.0377	1.96	0.0295	U	0.0688	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Zn-65	pCi/g	-0.00806	0.118	0.118	1.96	0.0982	U	0.214	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Ra-226	pCi/g	0.348	0.095	0.101	1.96	0.0442		0.100		30
160-43220-5	SAMP	FSS-146-082521	Soil	Ac-228	pCi/g	0.443	0.132	0.139	1.96	0.0277		0.0813		30
160-43220-5	SAMP	FSS-146-082521	Soil	Eu-155	pCi/g	0.00	0.0936	0.0936	1.96	0.201	U	0.411	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Am-241	pCi/g	0.0603	0.129	0.129	1.96	0.106	U	0.220	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Eu-152	pCi/g	0.163	0.0858	0.0875	1.96	0.0623		0.132		30
160-43220-5	SAMP	FSS-146-082521	Soil	Bi-214	pCi/g	0.348	0.0950	0.101	1.96	0.0442		0.100		30
160-43220-5	SAMP	FSS-146-082521	Soil	Bi-212	pCi/g	0.343	0.551	0.552	1.96	0.4312	U	0.946	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Pb-214	pCi/g	0.418	0.0839	0.0941	1.96	0.0413		0.0924		30

160-43220-5	SAMP	FSS-146-082521	Soil	Pb-212	pCi/g	0.451	0.0758	0.095	1.96	0.0327		0.0719		30
160-43220-5	SAMP	FSS-146-082521	Soil	Eu-154	pCi/g	-0.0383	0.069	0.0691	1.96	0.0564	U	0.118	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Th-232	pCi/g	0.443	0.132	0.139	1.96	0.0277		0.0813		30
160-43220-6	SAMP	FSS-147-082521	Soil	Cs-137	pCi/g	0.152	0.0447	0.0473	1.96	0.0156		0.0376		30
160-43220-6	SAMP	FSS-147-082521	Soil	Co-60	pCi/g	0.0112	0.0261	0.0261	1.96	0.0191	U	0.0475	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	K-40	pCi/g	2.94	0.681	0.743	1.96	0.218		0.531		30
160-43220-6	SAMP	FSS-147-082521	Soil	Na-22	pCi/g	-0.00443	0.0319	0.0319	1.96	0.0261	U	0.0611	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Zn-65	pCi/g	0.00	0.0231	0.0231	1.96	0.0743	U	0.165	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Ra-226	pCi/g	0.220	0.0826	0.0856	1.96	0.0405		0.092		30
160-43220-6	SAMP	FSS-147-082521	Soil	Ac-228	pCi/g	0.251	0.119	0.122	1.96	0.0833		0.190		30
160-43220-6	SAMP	FSS-147-082521	Soil	Eu-155	pCi/g	-0.0513	0.225	0.225	1.96	0.188	U	0.384	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Am-241	pCi/g	-0.0293	0.109	0.109	1.96	0.0683	U	0.144	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Eu-152	pCi/g	0.0637	0.114	0.114	1.96	0.0601		0.127	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Bi-214	pCi/g	0.220	0.0826	0.0856	1.96	0.0405		0.0920		30
160-43220-6	SAMP	FSS-147-082521	Soil	Bi-212	pCi/g	0.418	0.740	0.741	1.96	0.595	U	1.27	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Pb-214	pCi/g	0.289	0.0791	0.0844	1.96	0.0340		0.0771		30
160-43220-6	SAMP	FSS-147-082521	Soil	Pb-212	pCi/g	0.327	0.0669	0.0787	1.96	0.0340		0.0741		30
160-43220-6	SAMP	FSS-147-082521	Soil	Eu-154	pCi/g	0.0749	0.0392	0.040	1.96	0.0426		0.0898	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Th-232	pCi/g	0.251	0.119	0.122	1.96	0.0833		0.190		30
160-43220-7	SAMP	FSS-148-082521	Soil	Cs-137	pCi/g	0.137	0.0407	0.0431	1.96	0.0109		0.0283		30
160-43220-7	SAMP	FSS-148-082521	Soil	Co-60	pCi/g	0.00818	0.0398	0.0398	1.96	0.0195	U	0.0484	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	K-40	pCi/g	4.17	0.753	0.862	1.96	0.0824		0.261		30
160-43220-7	SAMP	FSS-148-082521	Soil	Na-22	pCi/g	-0.0327	0.0492	0.0493	1.96	0.0376	U	0.0843	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Zn-65	pCi/g	-0.0811	0.137	0.138	1.96	0.110	U	0.236	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Ra-226	pCi/g	0.261	0.0848	0.0889	1.96	0.0306		0.0725		30
160-43220-7	SAMP	FSS-148-082521	Soil	Ac-228	pCi/g	0.437	0.104	0.112	1.96	0.0209		0.0661		30
160-43220-7	SAMP	FSS-148-082521	Soil	Eu-155	pCi/g	-0.0000000063	0.191	0.191	1.96	0.161	U	0.331	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Am-241	pCi/g	-0.0572	0.125	0.125	1.96	0.103	U	0.214	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Eu-152	pCi/g	-0.0476	0.0851	0.0852	1.96	0.0693	U	0.145	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Bi-214	pCi/g	0.261	0.0848	0.0889	1.96	0.0306		0.0725		30
160-43220-7	SAMP	FSS-148-082521	Soil	Bi-212	pCi/g	0.164	0.356	0.356	1.96	0.277	U	0.632	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Pb-214	pCi/g	0.391	0.0831	0.0921	1.96	0.0245		0.0583		30
160-43220-7	SAMP	FSS-148-082521	Soil	Pb-212	pCi/g	0.420	0.0681	0.0864	1.96	0.0264		0.0589		30
160-43220-7	SAMP	FSS-148-082521	Soil	Eu-154	pCi/g	0.127	0.0532	0.0548	1.96	0.0458		0.0963		30
160-43220-7	SAMP	FSS-148-082521	Soil	Th-232	pCi/g	0.437	0.104	0.112	1.96	0.0209		0.0661		30
160-43220-8	SAMP	FSS-348-082521	Soil	Cs-137	pCi/g	0.0423	0.0764	0.0766	1.96	0.0609	U	0.132	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Co-60	pCi/g	0.00	0.0144	0.0144	1.96	0.0121	U	0.0383	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	K-40	pCi/g	4.19	0.919	1.01	1.96	0.122		0.386		30
160-43220-8	SAMP	FSS-348-082521	Soil	Na-22	pCi/g	-0.0218	0.0512	0.0513	1.96	0.0394	U	0.0925	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Zn-65	pCi/g	0.00	0.0557	0.0557	1.96	0.127	U	0.279	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Ra-226	pCi/g	0.324	0.125	0.129	1.96	0.0591		0.135		30
160-43220-8	SAMP	FSS-348-082521	Soil	Ac-228	pCi/g	0.392	0.297	0.300	1.96	0.141		0.318		30
160-43220-8	SAMP	FSS-348-082521	Soil	Eu-155	pCi/g	0.0373	0.0429	0.0431	1.96	0.292	U	0.598	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Am-241	pCi/g	0.0511	0.172	0.172	1.96	0.143	U	0.296	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Eu-152	pCi/g	0.128	0.186	0.186	1.96	0.0775		0.165	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Bi-214	pCi/g	0.324	0.125	0.129	1.96	0.0591		0.135		30
160-43220-8	SAMP	FSS-348-082521	Soil	Bi-212	pCi/g	0.00	0.659	0.659	1.96	0.650	U	1.42	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Pb-214	pCi/g	0.308	0.113	0.117	1.96	0.0540		0.122		30
160-43220-8	SAMP	FSS-348-082521	Soil	Pb-212	pCi/g	0.304	0.0867	0.0921	1.96	0.0495		0.108		30
160-43220-8	SAMP	FSS-348-082521	Soil	Eu-154	pCi/g	0.0148	0.0203	0.0203	1.96	0.0669	U	0.141	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Th-232	pCi/g	0.392	0.297	0.300	1.96	0.141		0.318		30
160-43220-9	SAMP	FSS-149-082521	Soil	Cs-137	pCi/g	-0.00105	0.0511	0.0511	1.96	0.0428	U	0.0949	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Co-60	pCi/g	0.0161	0.0557	0.0557	1.96	0.0268	U	0.0668	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	K-40	pCi/g	4.34	0.902	0.999	1.96	0.114		0.359		30
160-43220-9	SAMP	FSS-149-082521	Soil	Na-22	pCi/g	-0.0468	0.0608	0.061	1.96	0.0449	U	0.103	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Zn-65	pCi/g	-0.0486	0.159	0.159	1.96	0.129	U	0.282	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Ra-226	pCi/g	0.355	0.106	0.112	1.96	0.0435		0.103		30
160-43220-9	SAMP	FSS-149-082521	Soil	Ac-228	pCi/g	0.624	0.140	0.153	1.96	0.0293		0.0927		30
160-43220-9	SAMP	FSS-149-082521	Soil	Eu-155	pCi/g	-0.0964	0.335	0.335	1.96	0.279	U	0.571	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Am-241	pCi/g	0.0145	0.135	0.135	1.96	0.113	U	0.236	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Eu-152	pCi/g	-0.0209	0.109	0.109	1.96	0.0905	U	0.191	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Bi-214	pCi/g	0.355	0.106	0.112	1.96	0.0435		0.103		30
160-43220-9	SAMP	FSS-149-082521	Soil	Bi-212	pCi/g	0.221	0.526	0.526	1.96	0.413	U	0.937	U	30

160-43220-9	SAMP	FSS-149-082521	Soil	Pb-214	pCi/g	0.392	0.110	0.117	1.96	0.0586		0.13		30
160-43220-9	SAMP	FSS-149-082521	Soil	Pb-212	pCi/g	0.313	0.0816	0.0877	1.96	0.0444		0.0972		30
160-43220-9	SAMP	FSS-149-082521	Soil	Eu-154	pCi/g	0.0291	0.0484	0.0485	1.96	0.0707	U	0.148	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Th-232	pCi/g	0.624	0.140	0.153	1.96	0.0293		0.0927		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Cs-137	pCi/g	29.49	0.718	3.04	1.96	0.122		0.254		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Co-60	pCi/g	9.061	0.335	0.946	1.96	0.0665		0.149		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Am-241	pCi/g	103.6	1.66	11.9	1.96	0.598		1.21		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Cs-137	pCi/g	0.00251	0.0422	0.0422	1.96	0.0351	U	0.0792	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Co-60	pCi/g	0.01081	0.0100	0.0101	1.96	0.0114	U	0.0362	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	K-40	pCi/g	0.1353	0.414	0.415	1.96	0.311	U	0.757	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Na-22	pCi/g	0.03319	0.0246	0.0248	1.96	0.0110		0.0349	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Zn-65	pCi/g	0.00	0.0404	0.0404	1.96	0.106	U	0.235	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Ra-226	pCi/g	-0.03458	0.113	0.113	1.96	0.0954	U	0.207	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Ac-228	pCi/g	-0.03204	0.149	0.149	1.96	0.0748	U	0.184	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-155	pCi/g	0.00	0.0283	0.0283	1.96	0.144	U	0.300	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Am-241	pCi/g	0.0903	0.0557	0.0564	1.96	0.0259		0.0624		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-152	pCi/g	0.08791	0.0478	0.0486	1.96	0.0579		0.125	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Bi-214	pCi/g	-0.03458	0.113	0.113	1.96	0.0954	U	0.207	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Bi-212	pCi/g	-0.2904	0.57	0.571	1.96	0.445	U	0.999	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Pb-214	pCi/g	0.1365	0.0820	0.0832	1.96	0.0530		0.119		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Pb-212	pCi/g	0.004431	0.0560	0.0560	1.96	0.0463	U	0.101	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-154	pCi/g	0.02761	0.0579	0.0580	1.96	0.0303	U	0.067	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Th-232	pCi/g	-0.03204	0.149	0.149	1.96	0.0748	U	0.184	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Ni-63	pCi/g	1.97	1.47	1.49	1.96	1.13		2.41	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Ni-63	pCi/g	3.02	1.74	1.77	1.96	1.31		2.80		30
160-43220-11	SAMP	FSS-150-082521	Soil	Ni-63	pCi/g	1.53	1.36	1.37	1.96	1.06		2.28	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Ni-63	pCi/g	1.90	2.09	2.10	1.96	1.64		3.52	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Ni-63	pCi/g	1.83	1.29	1.31	1.96	0.985		2.11	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Ni-63	pCi/g	2.79	1.60	1.62	1.96	1.19		2.55		30
160-43220-15	SAMP	FSS-088-081921	Soil	Ni-63	pCi/g	1.46	1.11	1.12	1.96	0.862		1.85	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Ni-63	pCi/g	2.59	1.52	1.55	1.96	1.14		2.45		30
160-43220-17	SAMP	FSS-090-081921	Soil	Ni-63	pCi/g	2.06	1.35	1.36	1.96	1.01		2.16	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Ni-63	pCi/g	2.89	1.73	1.76	1.96	1.30		2.78		30
160-43220-3	SAMP	FSS-138-082521	Soil	Ni-63	pCi/g	2.24	1.60	1.61	1.96	1.23		2.62	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Ni-63	pCi/g	1.86	1.56	1.57	1.96	1.21		2.60	U	30
160-43220-4 DU	QC_DUP	160-43220-4 DU	Soil	Ni-63	pCi/g	0.7685	0.920	0.923	1.96	0.717		1.53	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Ni-63	pCi/g	0.845	0.946	0.950	1.96	0.737		1.58	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Ni-63	pCi/g	2.14	1.35	1.37	1.96	1.02		2.18	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Ni-63	pCi/g	1.57	1.37	1.38	1.96	1.05		2.26	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Ni-63	pCi/g	1.55	1.28	1.29	1.96	1.00		2.14	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Ni-63	pCi/g	2.08	1.28	1.30	1.96	0.964		2.06		30
LCS 160-528318/2-A	QC_LCS	LCS 160-528318/2-A	Soil	Ni-63	pCi/g	21.32	2.55	3.35	1.96	1.19		2.54		30
MB 160-528318/1-A	QC_BLK	MB 160-528318/1-A	Soil	Ni-63	pCi/g	1.562	1.34	1.35	1.96	1.03		2.21	U	30
160-43220-1	SAMP	FSS-136-082521	Soil	Pu-241	pCi/g	-0.411	1.75	1.75	1.96	1.48	U	3.19	U	30
160-43220-10	SAMP	FSS-349-082521	Soil	Pu-241	pCi/g	-1.30	1.33	1.34	1.96	1.20	U	2.55	U	30
160-43220-11	SAMP	FSS-150-082521	Soil	Pu-241	pCi/g	-0.829	1.49	1.49	1.96	1.31	U	2.79	U	30
160-43220-12	SAMP	FSS-350-082521	Soil	Pu-241	pCi/g	-1.60	1.20	1.21	1.96	1.09	U	2.31	U	30
160-43220-13	SAMP	FSS-151-082521	Soil	Pu-241	pCi/g	-0.943	1.41	1.41	1.96	1.23	U	2.62	U	30
160-43220-14	SAMP	FSS-152-082521	Soil	Pu-241	pCi/g	-0.518	1.16	1.16	1.96	1.00	U	2.15	U	30
160-43220-15	SAMP	FSS-088-081921	Soil	Pu-241	pCi/g	-0.95	1.40	1.40	1.96	1.22	U	2.59	U	30
160-43220-16	SAMP	FSS-089-081921	Soil	Pu-241	pCi/g	-0.642	1.41	1.41	1.96	1.21	U	2.58	U	30
160-43220-17	SAMP	FSS-090-081921	Soil	Pu-241	pCi/g	-0.519	1.69	1.69	1.96	1.46	U	3.11	U	30
160-43220-2	SAMP	FSS-137-082521	Soil	Pu-241	pCi/g	-1.61	1.77	1.77	1.96	1.63	U	3.52	U	30
160-43220-3	SAMP	FSS-138-082521	Soil	Pu-241	pCi/g	-0.624	1.63	1.64	1.96	1.40	U	3.02	U	30
160-43220-4	SAMP	FSS-145-082521	Soil	Pu-241	pCi/g	0.404	1.66	1.66	1.96	1.34	U	2.88	U	30
160-43220-5	SAMP	FSS-146-082521	Soil	Pu-241	pCi/g	0.389	1.74	1.74	1.96	1.45	U	3.13	U	30
160-43220-6	SAMP	FSS-147-082521	Soil	Pu-241	pCi/g	-0.272	1.62	1.62	1.96	1.37	U	2.97	U	30
160-43220-7	SAMP	FSS-148-082521	Soil	Pu-241	pCi/g	-1.51	1.28	1.29	1.96	1.17	U	2.49	U	30
160-43220-7 DU	QC_DUP	160-43220-7 DU	Soil	Pu-241	pCi/g	-0.6282	1.44	1.44	1.96	1.26	U	2.68	U	30
160-43220-8	SAMP	FSS-348-082521	Soil	Pu-241	pCi/g	-1.17	1.28	1.29	1.96	1.14	U	2.42	U	30
160-43220-9	SAMP	FSS-149-082521	Soil	Pu-241	pCi/g	-0.622	1.37	1.37	1.96	1.18	U	2.52	U	30
LCS 160-526535/2-A	QC_LCS	LCS 160-526535/2-A	Soil	Pu-241	pCi/g	17.52	2.39	2.85	1.96	1.23		2.61		30
LCS 160-526537/2-A	QC_LCS	LCS 160-526537/2-A	Soil	Pu-241	pCi/g	17.22	2.66	3.06	1.96	1.35		2.90		30

MB 160-526535/1-A	QC_BLK	MB 160-526535/1-A	Soil	Pu-241	pCi/g	-1.191	1.50	1.50	1.96	1.32	U	2.82	U	30
MB 160-526537/1-A	QC_BLK	MB 160-526537/1-A	Soil	Pu-241	pCi/g	-0.5613	1.51	1.51	1.96	1.30	U	2.81	U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43230-1	SAMP	FSS-153-082621	Soil	Sr-90	pCi/g	-0.0463	0.151	0.151	1.96	0.131	U	0.284	U	200
160-43230-10	SAMP	FSS-162-082621	Soil	Sr-90	pCi/g	0.442	0.290	0.292	1.96	0.281		0.447	U	100
160-43230-11	SAMP	FSS-163-082621	Soil	Sr-90	pCi/g	0.295	0.302	0.303	1.96	0.313	U	0.500	U	100
160-43230-12	SAMP	FSS-164-082621	Soil	Sr-90	pCi/g	0.609	0.312	0.316	1.96	0.289		0.457		100
160-43230-13	SAMP	FSS-165-082621	Soil	Sr-90	pCi/g	-0.0295	0.255	0.255	1.96	0.308	U	0.490	U	100
160-43230-14	SAMP	FSS-166-082621	Soil	Sr-90	pCi/g	0.104	0.213	0.213	1.96	0.235	U	0.380	U	100
160-43230-15	SAMP	FSS-167-082621	Soil	Sr-90	pCi/g	0.262	0.269	0.269	1.96	0.279	U	0.445	U	100
160-43230-16	SAMP	FSS-168-082621	Soil	Sr-90	pCi/g	0.330	0.322	0.324	1.96	0.339	U	0.532	U	100
160-43230-17	SAMP	FSS-169-082621	Soil	Sr-90	pCi/g	-0.0875	0.212	0.212	1.96	0.267	U	0.428	U	100
160-43230-18	SAMP	FSS-170-082621	Soil	Sr-90	pCi/g	0.188	0.255	0.256	1.96	0.274	U	0.437	U	100
160-43230-2	SAMP	FSS-154-082621	Soil	Sr-90	pCi/g	0.0308	0.135	0.135	1.96	0.110	U	0.243	U	200
160-43230-3	SAMP	FSS-155-082621	Soil	Sr-90	pCi/g	0.124	0.148	0.149	1.96	0.114		0.250	U	200
160-43230-4	SAMP	FSS-156-082621	Soil	Sr-90	pCi/g	0.616	0.194	0.200	1.96	0.116		0.256		200
160-43230-5	SAMP	FSS-157-082621	Soil	Sr-90	pCi/g	0.310	0.186	0.188	1.96	0.135		0.292		200
160-43230-6	SAMP	FSS-158-082621	Soil	Sr-90	pCi/g	0.161	0.161	0.161	1.96	0.123		0.267	U	200
160-43230-7	SAMP	FSS-159-082621	Soil	Sr-90	pCi/g	0.130	0.165	0.165	1.96	0.128		0.279	U	200
160-43230-8	SAMP	FSS-160-082621	Soil	Sr-90	pCi/g	0.083	0.180	0.180	1.96	0.205	U	0.316	U	200
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Sr-90	pCi/g	0.4104	0.297	0.299	1.96	0.294		0.467	U	100
160-43230-9	SAMP	FSS-161-082621	Soil	Sr-90	pCi/g	0.341	0.275	0.276	1.96	0.270		0.436	U	100
LCS 160-527804/2-A	QC_LCS	LCS 160-527804/2-A	Soil	Sr-90	pCi/g	6.549	0.592	0.792	1.96	0.185		0.406		200
LCS 160-527864/1-A	QC_LCS	LCS 160-527864/1-A	Soil	Sr-90	pCi/g	6.269	0.528	0.730	1.96	0.228		0.352		200
MB 160-527804/1-A	QC_BLK	MB 160-527804/1-A	Soil	Sr-90	pCi/g	0.1069	0.195	0.195	1.96	0.155	U	0.338	U	200
MB 160-527864/23-A	QC_BLK	MB 160-527864/23-A	Soil	Sr-90	pCi/g	0.09801	0.202	0.202	1.96	0.229	U	0.352	U	200
160-43230-1	SAMP	FSS-153-082621	Soil	H-3	pCi/g	-0.0329	0.227	0.227	1.96	0.195	U	0.427	U	20
160-43230-10	SAMP	FSS-162-082621	Soil	H-3	pCi/g	-0.0733	0.216	0.216	1.96	0.188	U	0.412	U	20
160-43230-11	SAMP	FSS-163-082621	Soil	H-3	pCi/g	-0.135	0.208	0.209	1.96	0.187	U	0.410	U	20
160-43230-12	SAMP	FSS-164-082621	Soil	H-3	pCi/g	-0.000591	0.219	0.219	1.96	0.183	U	0.401	U	20
160-43230-13	SAMP	FSS-165-082621	Soil	H-3	pCi/g	-0.243	0.195	0.196	1.96	0.185	U	0.404	U	20
160-43230-14	SAMP	FSS-166-082621	Soil	H-3	pCi/g	0.0206	0.227	0.227	1.96	0.190	U	0.416	U	20
160-43230-15	SAMP	FSS-167-082621	Soil	H-3	pCi/g	-0.0552	0.219	0.219	1.96	0.189	U	0.413	U	20
160-43230-16	SAMP	FSS-168-082621	Soil	H-3	pCi/g	0.132	0.242	0.242	1.96	0.194	U	0.424	U	20
160-43230-17	SAMP	FSS-169-082621	Soil	H-3	pCi/g	-0.0506	0.225	0.225	1.96	0.197	U	0.430	U	20
160-43230-17 MS	QC_MS	160-43230-17 MS	Soil	H-3	pCi/g	6.777	0.598	0.836	1.96	0.189		0.413		20
160-43230-18	SAMP	FSS-170-082621	Soil	H-3	pCi/g	-0.126	0.206	0.206	1.96	0.183	U	0.401	U	20
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	H-3	pCi/g	-0.161	0.208	0.208	1.96	0.189	U	0.414	U	20
160-43230-2	SAMP	FSS-154-082621	Soil	H-3	pCi/g	-0.150	0.208	0.208	1.96	0.188	U	0.410	U	20
160-43230-3	SAMP	FSS-155-082621	Soil	H-3	pCi/g	0.138	0.236	0.236	1.96	0.187	U	0.409	U	20
160-43230-4	SAMP	FSS-156-082621	Soil	H-3	pCi/g	-0.162	0.203	0.203	1.96	0.184	U	0.403	U	20
160-43230-5	SAMP	FSS-157-082621	Soil	H-3	pCi/g	-0.214	0.200	0.201	1.96	0.188	U	0.411	U	20
160-43230-6	SAMP	FSS-158-082621	Soil	H-3	pCi/g	-0.122	0.211	0.211	1.96	0.188	U	0.411	U	20
160-43230-7	SAMP	FSS-159-082621	Soil	H-3	pCi/g	-0.111	0.211	0.211	1.96	0.186	U	0.407	U	20
160-43230-8	SAMP	FSS-160-082621	Soil	H-3	pCi/g	-0.130	0.205	0.205	1.96	0.183	U	0.400	U	20
160-43230-9	SAMP	FSS-161-082621	Soil	H-3	pCi/g	-0.160	0.212	0.212	1.96	0.194	U	0.424	U	20
LCS 160-528889/2-A	QC_LCS	LCS 160-528889/2-A	Soil	H-3	pCi/g	7.311	0.606	0.875	1.96	0.183		0.399		20
MB 160-528889/1-A	QC_BLK	MB 160-528889/1-A	Soil	H-3	pCi/g	-0.188	0.212	0.213	1.96	0.197	U	0.430	U	20
160-43230-1	SAMP	FSS-153-082621	Soil	Pu-238	pCi/g	0.0102	0.0297	0.0297	1.96	0.0199	U	0.0643	U	240
160-43230-1	SAMP	FSS-153-082621	Soil	Pu-239/Pu-240	pCi/g	0.00613	0.0165	0.0165	1.96	0.00752	U	0.0396	U	240
160-43230-10	SAMP	FSS-162-082621	Soil	Pu-238	pCi/g	-0.0215	0.0133	0.0135	1.96	0.0250	U	0.0759	U	240
160-43230-10	SAMP	FSS-162-082621	Soil	Pu-239/Pu-240	pCi/g	-0.00431	0.0198	0.0198	1.96	0.0194	U	0.0647	U	240
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	Pu-238	pCi/g	0.00683	0.0483	0.0483	1.96	0.0384	U	0.104	U	240
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	Pu-239/Pu-240	pCi/g	0.01595	0.0382	0.0382	1.96	0.0251	U	0.0776	U	240
160-43230-11	SAMP	FSS-163-082621	Soil	Pu-238	pCi/g	0.0312	0.0405	0.0406	1.96	0.0201		0.0669	U	240
160-43230-11	SAMP	FSS-163-082621	Soil	Pu-239/Pu-240	pCi/g	0.0246	0.0306	0.0307	1.96	0.00821		0.0432	U	240
160-43230-12	SAMP	FSS-164-082621	Soil	Pu-238	pCi/g	-0.00231	0.0207	0.0207	1.96	0.0190	U	0.0656	U	240
160-43230-12	SAMP	FSS-164-082621	Soil	Pu-239/Pu-240	pCi/g	0.00231	0.0197	0.0197	1.96	0.0147	U	0.0571	U	240
160-43230-13	SAMP	FSS-165-082621	Soil	Pu-238	pCi/g	0.0133	0.0254	0.0254	1.96	0.0115		0.0497	U	240
160-43230-13	SAMP	FSS-165-082621	Soil	Pu-239/Pu-240	pCi/g	0.0111	0.0323	0.0323	1.96	0.0216	U	0.0699	U	240
160-43230-14	SAMP	FSS-166-082621	Soil	Pu-238	pCi/g	0.00755	0.0203	0.0203	1.96	0.00925	U	0.0487	U	240
160-43230-14	SAMP	FSS-166-082621	Soil	Pu-239/Pu-240	pCi/g	-0.00252	0.00494	0.00494	1.96	0.00926	U	0.0487	U	240
160-43230-15	SAMP	FSS-167-082621	Soil	Pu-238	pCi/g	0.00668	0.0180	0.0180	1.96	0.00819	U	0.0431	U	240
160-43230-15	SAMP	FSS-167-082621	Soil	Pu-239/Pu-240	pCi/g	0.00	0.00437	0.00437	1.96	0.00820	U	0.0267	U	240
160-43230-16	SAMP	FSS-168-082621	Soil	Pu-238	pCi/g	0.0117	0.0398	0.0398	1.96	0.0273	U	0.0897	U	960

160-43230-16	SAMP	FSS-168-082621	Soil	Pu-239/Pu-240	pCi/g	0.00	0.0325	0.0325	1.96	0.0273	U	0.0898	U	960
160-43230-17	SAMP	FSS-169-082621	Soil	Pu-238	pCi/g	0.00366	0.0124	0.0124	1.96	0.00851	U	0.0280	U	960
160-43230-17	SAMP	FSS-169-082621	Soil	Pu-239/Pu-240	pCi/g	0.00732	0.0102	0.0102	1.96	0.00852	U	0.0110	U	960
160-43230-18	SAMP	FSS-170-082621	Soil	Pu-238	pCi/g	0.00	0.00484	0.00484	1.96	0.00909	U	0.0297	U	240
160-43230-18	SAMP	FSS-170-082621	Soil	Pu-239/Pu-240	pCi/g	0.0198	0.0274	0.0275	1.96	0.00910		0.0297	U	240
160-43230-2	SAMP	FSS-154-082621	Soil	Pu-238	pCi/g	0.00	0.0173	0.0173	1.96	0.0145	U	0.0527	U	240
160-43230-2	SAMP	FSS-154-082621	Soil	Pu-239/Pu-240	pCi/g	0.00593	0.0160	0.0160	1.96	0.00727	U	0.0383	U	240
160-43230-3	SAMP	FSS-155-082621	Soil	Pu-238	pCi/g	0.00202	0.0248	0.0248	1.96	0.0197	U	0.0637	U	240
160-43230-3	SAMP	FSS-155-082621	Soil	Pu-239/Pu-240	pCi/g	0.00608	0.0164	0.0164	1.96	0.00745	U	0.0392	U	240
160-43230-4	SAMP	FSS-156-082621	Soil	Pu-238	pCi/g	-0.00620	0.0266	0.0266	1.96	0.0252	U	0.0752	U	240
160-43230-4	SAMP	FSS-156-082621	Soil	Pu-239/Pu-240	pCi/g	0.0207	0.0287	0.0287	1.96	0.0108		0.0463	U	240
160-43230-5	SAMP	FSS-157-082621	Soil	Pu-238	pCi/g	-0.0102	0.0268	0.0268	1.96	0.0270	U	0.0784	U	240
160-43230-5	SAMP	FSS-157-082621	Soil	Pu-239/Pu-240	pCi/g	0.0102	0.0236	0.0236	1.96	0.0130	U	0.0504	U	240
160-43230-6	SAMP	FSS-158-082621	Soil	Pu-238	pCi/g	0.00795	0.0292	0.0292	1.96	0.0207	U	0.0652	U	240
160-43230-6	SAMP	FSS-158-082621	Soil	Pu-239/Pu-240	pCi/g	-0.00199	0.0039	0.0039	1.96	0.00732	U	0.0385	U	240
160-43230-7	SAMP	FSS-159-082621	Soil	Pu-238	pCi/g	0.0136	0.0219	0.0220	1.96	0.00717		0.0377	U	240
160-43230-7	SAMP	FSS-159-082621	Soil	Pu-239/Pu-240	pCi/g	-0.00390	0.00541	0.00542	1.96	0.0101	U	0.0437	U	240
160-43230-8	SAMP	FSS-160-082621	Soil	Pu-238	pCi/g	-0.0239	0.0221	0.0222	1.96	0.0294	U	0.0826	U	240
160-43230-8	SAMP	FSS-160-082621	Soil	Pu-239/Pu-240	pCi/g	-0.024	0.0136	0.0137	1.96	0.0254	U	0.0749	U	240
160-43230-9	SAMP	FSS-161-082621	Soil	Pu-238	pCi/g	0.0262	0.0298	0.0298	1.96	0.00972		0.0419	U	240
160-43230-9	SAMP	FSS-161-082621	Soil	Pu-239/Pu-240	pCi/g	0.0131	0.0211	0.0211	1.96	0.00688		0.0362	U	240
LCS 160-526442/2-A	QC_LCS	LCS 160-526442/2-A	Soil	Pu-238	pCi/g	4.891	0.377	0.551	1.96	0.0249		0.0723		240
LCS 160-526442/2-A	QC_LCS	LCS 160-526442/2-A	Soil	Pu-239/Pu-240	pCi/g	5.065	0.383	0.566	1.96	0.0120		0.0465		240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-238	pCi/g	5.060	0.408	0.583	1.96	0.0176		0.0607		240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-239/Pu-240	pCi/g	5.486	0.424	0.620	1.96	0.00786		0.0256		240
MB 160-526442/1-A	QC_BLK	MB 160-526442/1-A	Soil	Pu-238	pCi/g	0.0098	0.0333	0.0333	1.96	0.0239	U	0.0713	U	240
MB 160-526442/1-A	QC_BLK	MB 160-526442/1-A	Soil	Pu-239/Pu-240	pCi/g	0.003924	0.0163	0.0163	1.96	0.0102	U	0.044	U	240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-238	pCi/g	0.004267	0.0177	0.0177	1.96	0.0111	U	0.0478	U	240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-239/Pu-240	pCi/g	0.008542	0.0251	0.0251	1.96	0.0157	U	0.057	U	240
160-43230-1	SAMP	FSS-153-082621	Soil	U-233/U-234	pCi/g	0.194	0.0804	0.082	1.96	0.0133		0.0516		240
160-43230-1	SAMP	FSS-153-082621	Soil	U-235/U-236	pCi/g	0.0311	0.0352	0.0353	1.96	0.00954		0.0311		240
160-43230-1	SAMP	FSS-153-082621	Soil	U-238	pCi/g	0.239	0.0879	0.0901	1.96	0.00765		0.0403		240
160-43230-10	SAMP	FSS-162-082621	Soil	U-233/U-234	pCi/g	0.142	0.0721	0.0731	1.96	0.0251		0.0739		240
160-43230-10	SAMP	FSS-162-082621	Soil	U-235/U-236	pCi/g	0.00	0.00481	0.00481	1.96	0.00903	U	0.0295	U	240
160-43230-10	SAMP	FSS-162-082621	Soil	U-238	pCi/g	0.228	0.0849	0.0869	1.96	0.0145		0.0526		240
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	U-233/U-234	pCi/g	0.2822	0.100	0.103	1.96	0.0144		0.0559		240
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	U-235/U-236	pCi/g	0.005618	0.0234	0.0234	1.96	0.0146	U	0.0629	U	240
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	U-238	pCi/g	0.3154	0.104	0.108	1.96	0.00829		0.0270		240
160-43230-11	SAMP	FSS-163-082621	Soil	U-233/U-234	pCi/g	0.295	0.105	0.108	1.96	0.0270		0.0807		240
160-43230-11	SAMP	FSS-163-082621	Soil	U-235/U-236	pCi/g	0.0524	0.0487	0.0489	1.96	0.0101		0.0534	U	240
160-43230-11	SAMP	FSS-163-082621	Soil	U-238	pCi/g	0.288	0.0998	0.103	1.96	0.0115		0.0496		240
160-43230-12	SAMP	FSS-164-082621	Soil	U-233/U-234	pCi/g	0.261	0.0942	0.0966	1.96	0.00806		0.0424		240
160-43230-12	SAMP	FSS-164-082621	Soil	U-235/U-236	pCi/g	0.00	0.00535	0.00535	1.96	0.0100	U	0.0327	U	240
160-43230-12	SAMP	FSS-164-082621	Soil	U-238	pCi/g	0.291	0.100	0.103	1.96	0.0139		0.0541		240
160-43230-13	SAMP	FSS-165-082621	Soil	U-233/U-234	pCi/g	0.246	0.0922	0.0944	1.96	0.00816		0.043		240
160-43230-13	SAMP	FSS-165-082621	Soil	U-235/U-236	pCi/g	0.00828	0.0223	0.0223	1.96	0.0102	U	0.0535	U	240
160-43230-13	SAMP	FSS-165-082621	Soil	U-238	pCi/g	0.184	0.082	0.0834	1.96	0.0182		0.063		240
160-43230-14	SAMP	FSS-166-082621	Soil	U-233/U-234	pCi/g	0.221	0.0952	0.0969	1.96	0.0250		0.0789		240
160-43230-14	SAMP	FSS-166-082621	Soil	U-235/U-236	pCi/g	0.00598	0.0249	0.0249	1.96	0.0156	U	0.067	U	240
160-43230-14	SAMP	FSS-166-082621	Soil	U-238	pCi/g	0.264	0.0997	0.102	1.96	0.0125		0.0537		240
160-43230-15	SAMP	FSS-167-082621	Soil	U-233/U-234	pCi/g	0.170	0.0789	0.0802	1.96	0.0165		0.0598		240
160-43230-15	SAMP	FSS-167-082621	Soil	U-235/U-236	pCi/g	0.0195	0.0313	0.0314	1.96	0.0102		0.0539	U	240
160-43230-15	SAMP	FSS-167-082621	Soil	U-238	pCi/g	0.167	0.0789	0.0801	1.96	0.0184		0.0635		240
160-43230-16	SAMP	FSS-168-082621	Soil	U-233/U-234	pCi/g	0.434	0.163	0.167	1.96	0.0414		0.126		600
160-43230-16	SAMP	FSS-168-082621	Soil	U-235/U-236	pCi/g	0.0179	0.0352	0.0352	1.96	0.0297	U	0.0538	U	600
160-43230-16	SAMP	FSS-168-082621	Soil	U-238	pCi/g	0.423	0.155	0.159	1.96	0.0239		0.0909		600
160-43230-17	SAMP	FSS-169-082621	Soil	U-233/U-234	pCi/g	0.212	0.125	0.126	1.96	0.0504		0.145		240
160-43230-17	SAMP	FSS-169-082621	Soil	U-235/U-236	pCi/g	-0.0228	0.0200	0.0201	1.96	0.0375	U	0.130	U	240
160-43230-17	SAMP	FSS-169-082621	Soil	U-238	pCi/g	0.259	0.122	0.124	1.96	0.0134		0.0707		240
160-43230-18	SAMP	FSS-170-082621	Soil	U-233/U-234	pCi/g	0.192	0.0826	0.0841	1.96	0.0192		0.0641		240
160-43230-18	SAMP	FSS-170-082621	Soil	U-235/U-236	pCi/g	0.00797	0.0215	0.0215	1.96	0.00977	U	0.0514	U	240
160-43230-18	SAMP	FSS-170-082621	Soil	U-238	pCi/g	0.164	0.0751	0.0763	1.96	0.0136		0.0527		240
160-43230-2	SAMP	FSS-154-082621	Soil	U-233/U-234	pCi/g	0.255	0.0879	0.0904	1.96	0.0122		0.0475		240

160-43230-2	SAMP	FSS-154-082621	Soil	U-235/U-236	pCi/g	0.0167	0.0269	0.0269	1.96	0.00878		0.0462	U	240
160-43230-2	SAMP	FSS-154-082621	Soil	U-238	pCi/g	0.195	0.0767	0.0784	1.96	0.0100		0.0429		240
160-43230-3	SAMP	FSS-155-082621	Soil	U-233/U-234	pCi/g	0.398	0.114	0.118	1.96	0.0260		0.0755		240
160-43230-3	SAMP	FSS-155-082621	Soil	U-235/U-236	pCi/g	0.0122	0.0283	0.0283	1.96	0.0155	U	0.0604	U	240
160-43230-3	SAMP	FSS-155-082621	Soil	U-238	pCi/g	0.292	0.0964	0.0993	1.96	0.0190		0.0616		240
160-43230-4	SAMP	FSS-156-082621	Soil	U-233/U-234	pCi/g	0.637	0.153	0.162	1.96	0.0290		0.0853		240
160-43230-4	SAMP	FSS-156-082621	Soil	U-235/U-236	pCi/g	0.0566	0.0496	0.0498	1.96	0.0104		0.0340		240
160-43230-4	SAMP	FSS-156-082621	Soil	U-238	pCi/g	0.745	0.162	0.174	1.96	0.0167		0.0607		240
160-43230-5	SAMP	FSS-157-082621	Soil	U-233/U-234	pCi/g	0.410	0.116	0.120	1.96	0.0133		0.0515		240
160-43230-5	SAMP	FSS-157-082621	Soil	U-235/U-236	pCi/g	0.0389	0.0409	0.0411	1.96	0.00953		0.0501	U	240
160-43230-5	SAMP	FSS-157-082621	Soil	U-238	pCi/g	0.413	0.115	0.12	1.96	0.00764		0.0402		240
160-43230-6	SAMP	FSS-158-082621	Soil	U-233/U-234	pCi/g	0.311	0.101	0.104	1.96	0.00779		0.0410		240
160-43230-6	SAMP	FSS-158-082621	Soil	U-235/U-236	pCi/g	0.0211	0.0292	0.0293	1.96	0.00969		0.0316	U	240
160-43230-6	SAMP	FSS-158-082621	Soil	U-238	pCi/g	0.406	0.116	0.121	1.96	0.0155		0.0564		240
160-43230-7	SAMP	FSS-159-082621	Soil	U-233/U-234	pCi/g	0.241	0.0909	0.0931	1.96	0.0114		0.0490		240
160-43230-7	SAMP	FSS-159-082621	Soil	U-235/U-236	pCi/g	-0.00544	0.00755	0.00756	1.96	0.0142	U	0.061	U	240
160-43230-7	SAMP	FSS-159-082621	Soil	U-238	pCi/g	0.249	0.0924	0.0946	1.96	0.0114		0.0489		240
160-43230-8	SAMP	FSS-160-082621	Soil	U-233/U-234	pCi/g	0.406	0.115	0.120	1.96	0.0109		0.0469		240
160-43230-8	SAMP	FSS-160-082621	Soil	U-235/U-236	pCi/g	0.0182	0.0293	0.0294	1.96	0.00958		0.0504	U	240
160-43230-8	SAMP	FSS-160-082621	Soil	U-238	pCi/g	0.368	0.110	0.114	1.96	0.0154		0.0558		240
160-43230-9	SAMP	FSS-161-082621	Soil	U-233/U-234	pCi/g	0.412	0.116	0.121	1.96	0.0152		0.0551		240
160-43230-9	SAMP	FSS-161-082621	Soil	U-235/U-236	pCi/g	0.0077	0.0207	0.0207	1.96	0.00944	U	0.0497	U	240
160-43230-9	SAMP	FSS-161-082621	Soil	U-238	pCi/g	0.393	0.112	0.116	1.96	0.00757		0.0398		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-233/U-234	pCi/g	6.237	0.448	0.681	1.96	0.0109		0.0468		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-238	pCi/g	6.413	0.453	0.696	1.96	0.00767		0.0250		240
LCS 160-526534/2-A	QC_LCS	LCS 160-526534/2-A	Soil	U-233/U-234	pCi/g	6.64	0.452	0.709	1.96	0.00736		0.0387		240
LCS 160-526534/2-A	QC_LCS	LCS 160-526534/2-A	Soil	U-238	pCi/g	6.719	0.454	0.716	1.96	0.0127		0.0494		240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-233/U-234	pCi/g	-0.008128	0.00797	0.00799	1.96	0.0149	U	0.0543	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-235/U-236	pCi/g	0.02023	0.0357	0.0358	1.96	0.0186		0.0675	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-238	pCi/g	0.02028	0.0281	0.0282	1.96	0.0105		0.0454	U	240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-233/U-234	pCi/g	0.01009	0.0343	0.0343	1.96	0.0246	U	0.0735	U	240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-235/U-236	pCi/g	0.007533	0.0203	0.0203	1.96	0.00924	U	0.0486	U	240
MB 160-526534/1-A	QC_BLK	MB 160-526534/1-A	Soil	U-238	pCi/g	0.01208	0.023	0.023	1.96	0.0105		0.0451	U	240
160-43230-1	SAMP	FSS-153-082621	Soil	C-14	pCi/g	0.610	0.661	0.664	1.96	0.522		1.11	U	20
160-43230-1 DU	QC_DUP	160-43230-1 DU	Soil	C-14	pCi/g	0.09502	0.637	0.637	1.96	0.528	U	1.12	U	20
160-43230-1 MS	QC_MS	160-43230-1 MS	Soil	C-14	pCi/g	67.41	2.46	7.55	1.96	0.540		1.14		20
160-43230-10	SAMP	FSS-162-082621	Soil	C-14	pCi/g	0.454	0.692	0.694	1.96	0.566	U	1.20	U	20
160-43230-11	SAMP	FSS-163-082621	Soil	C-14	pCi/g	-0.0842	0.745	0.745	1.96	0.627	U	1.33	U	20
160-43230-12	SAMP	FSS-164-082621	Soil	C-14	pCi/g	-0.0938	0.677	0.677	1.96	0.575	U	1.22	U	20
160-43230-13	SAMP	FSS-165-082621	Soil	C-14	pCi/g	0.392	0.829	0.831	1.96	0.675	U	1.43	U	20
160-43230-14	SAMP	FSS-166-082621	Soil	C-14	pCi/g	0.196	0.821	0.821	1.96	0.679	U	1.44	U	20
160-43230-15	SAMP	FSS-167-082621	Soil	C-14	pCi/g	0.0763	0.656	0.656	1.96	0.545	U	1.16	U	20
160-43230-16	SAMP	FSS-168-082621	Soil	C-14	pCi/g	-0.102	0.630	0.631	1.96	0.530	U	1.12	U	20
160-43230-17	SAMP	FSS-169-082621	Soil	C-14	pCi/g	-0.0983	0.712	0.712	1.96	0.603	U	1.28	U	20
160-43230-18	SAMP	FSS-170-082621	Soil	C-14	pCi/g	0.0901	0.804	0.804	1.96	0.672	U	1.43	U	20
160-43230-2	SAMP	FSS-154-082621	Soil	C-14	pCi/g	0.501	0.786	0.788	1.96	0.632	U	1.34	U	20
160-43230-3	SAMP	FSS-155-082621	Soil	C-14	pCi/g	0.577	0.522	0.526	1.96	0.408		0.866	U	20
160-43230-4	SAMP	FSS-156-082621	Soil	C-14	pCi/g	1.06	0.870	0.878	1.96	0.673		1.43	U	20
160-43230-5	SAMP	FSS-157-082621	Soil	C-14	pCi/g	0.335	0.761	0.762	1.96	0.620	U	1.31	U	20
160-43230-6	SAMP	FSS-158-082621	Soil	C-14	pCi/g	0.715	0.649	0.654	1.96	0.506		1.07	U	20
160-43230-7	SAMP	FSS-159-082621	Soil	C-14	pCi/g	0.938	0.723	0.730	1.96	0.556		1.18	U	20
160-43230-8	SAMP	FSS-160-082621	Soil	C-14	pCi/g	0.478	0.641	0.643	1.96	0.510	U	1.08	U	20
160-43230-9	SAMP	FSS-161-082621	Soil	C-14	pCi/g	0.502	0.705	0.707	1.96	0.567	U	1.20	U	20
LCS 160-528936/2-A	QC_LCS	LCS 160-528936/2-A	Soil	C-14	pCi/g	83.36	3.06	9.34	1.96	0.674		1.43		20
LCS 160-529126/2-A	QC_LCS	LCS 160-529126/2-A	Soil	C-14	pCi/g	81.71	3.02	9.16	1.96	0.661		1.40		20
MB 160-528936/1-A	QC_BLK	MB 160-528936/1-A	Soil	C-14	pCi/g	0.4459	0.839	0.841	1.96	0.680	U	1.44	U	20
MB 160-529126/1-A	QC_BLK	MB 160-529126/1-A	Soil	C-14	pCi/g	0.3198	0.809	0.809	1.96	0.661	U	1.40	U	20
160-43230-1	SAMP	FSS-153-082621	Soil	Cs-137	pCi/g	0.0313	0.0533	0.0534	1.96	0.0423	U	0.0916	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Co-60	pCi/g	-0.0544	0.0882	0.0884	1.96	0.0424	U	0.0951	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	K-40	pCi/g	3.11	0.750	0.812	1.96	0.257		0.619		30
160-43230-1	SAMP	FSS-153-082621	Soil	Na-22	pCi/g	-0.0504	0.0555	0.0557	1.96	0.0409	U	0.0918	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Zn-65	pCi/g	0.00	0.0182	0.0182	1.96	0.0882	U	0.194	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Ra-226	pCi/g	0.444	0.129	0.137	1.96	0.0484		0.109		30

160-43230-1	SAMP	FSS-153-082621	Soil	Ac-228	pCi/g	0.512	0.132	0.141	1.96	0.0508		0.128		30
160-43230-1	SAMP	FSS-153-082621	Soil	Eu-155	pCi/g	0.0795	0.288	0.288	1.96	0.240	U	0.491	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Am-241	pCi/g	-0.0739	0.060	0.0605	1.96	0.0925	U	0.193	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Eu-152	pCi/g	0.0619	0.146	0.146	1.96	0.0683	U	0.144	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Bi-214	pCi/g	0.444	0.129	0.137	1.96	0.0484		0.109		30
160-43230-1	SAMP	FSS-153-082621	Soil	Bi-212	pCi/g	0.205	0.537	0.537	1.96	0.431	U	0.948	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Pb-214	pCi/g	0.416	0.0913	0.101	1.96	0.0532		0.117		30
160-43230-1	SAMP	FSS-153-082621	Soil	Pb-212	pCi/g	0.421	0.0797	0.0959	1.96	0.0406		0.0879		30
160-43230-1	SAMP	FSS-153-082621	Soil	Eu-154	pCi/g	0.0522	0.0854	0.0856	1.96	0.0468		0.0985	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Th-232	pCi/g	0.512	0.132	0.141	1.96	0.0508		0.128		30
160-43230-10	SAMP	FSS-162-082621	Soil	Cs-137	pCi/g	0.418	0.0764	0.0875	1.96	0.0201		0.0481		30
160-43230-10	SAMP	FSS-162-082621	Soil	Co-60	pCi/g	-0.00232	0.0451	0.0451	1.96	0.0100	U	0.0316	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	K-40	pCi/g	4.14	0.898	0.989	1.96	0.286		0.688		30
160-43230-10	SAMP	FSS-162-082621	Soil	Na-22	pCi/g	-0.0290	0.052	0.0521	1.96	0.0398	U	0.0908	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Zn-65	pCi/g	0.00	0.0145	0.0145	1.96	0.106	U	0.232	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Ra-226	pCi/g	0.262	0.101	0.105	1.96	0.0409		0.0957		30
160-43230-10	SAMP	FSS-162-082621	Soil	Ac-228	pCi/g	0.190	0.113	0.114	1.96	0.143		0.315	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Eu-155	pCi/g	0.00	0.0872	0.0872	1.96	0.170	U	0.351	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Am-241	pCi/g	-0.0508	0.131	0.131	1.96	0.0857	U	0.180	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Eu-152	pCi/g	0.0776	0.115	0.115	1.96	0.0759		0.160	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Bi-214	pCi/g	0.262	0.101	0.105	1.96	0.0409		0.0957		30
160-43230-10	SAMP	FSS-162-082621	Soil	Bi-212	pCi/g	0.185	0.478	0.478	1.96	0.379	U	0.854	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Pb-214	pCi/g	0.389	0.0925	0.101	1.96	0.0384		0.0884		30
160-43230-10	SAMP	FSS-162-082621	Soil	Pb-212	pCi/g	0.384	0.0838	0.097	1.96	0.0444		0.0965		30
160-43230-10	SAMP	FSS-162-082621	Soil	Eu-154	pCi/g	0.0285	0.0507	0.0508	1.96	0.0513	U	0.108	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Th-232	pCi/g	0.190	0.113	0.114	1.96	0.143		0.315	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Cs-137	pCi/g	0.223	0.0500	0.0549	1.96	0.0120		0.0299		30
160-43230-11	SAMP	FSS-163-082621	Soil	Co-60	pCi/g	0.00108	0.0358	0.0358	1.96	0.0180	U	0.0449	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	K-40	pCi/g	4.06	0.759	0.861	1.96	0.206		0.501		30
160-43230-11	SAMP	FSS-163-082621	Soil	Na-22	pCi/g	0.0376	0.0213	0.0216	1.96	0.0073		0.0231		30
160-43230-11	SAMP	FSS-163-082621	Soil	Zn-65	pCi/g	0.00	0.0154	0.0154	1.96	0.0790	U	0.173	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Ra-226	pCi/g	0.385	0.0966	0.104	1.96	0.0389		0.0882		30
160-43230-11	SAMP	FSS-163-082621	Soil	Ac-228	pCi/g	0.368	0.106	0.112	1.96	0.0495		0.121		30
160-43230-11	SAMP	FSS-163-082621	Soil	Eu-155	pCi/g	-0.00425	0.0102	0.0102	1.96	0.199	U	0.406	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Am-241	pCi/g	-0.0294	0.124	0.124	1.96	0.103	U	0.214	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Eu-152	pCi/g	0.0272	0.0794	0.0794	1.96	0.0502	U	0.107	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Bi-214	pCi/g	0.385	0.0966	0.104	1.96	0.0389		0.0882		30
160-43230-11	SAMP	FSS-163-082621	Soil	Bi-212	pCi/g	0.299	0.489	0.490	1.96	0.383	U	0.840	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Pb-214	pCi/g	0.418	0.0771	0.088	1.96	0.0356		0.0798		30
160-43230-11	SAMP	FSS-163-082621	Soil	Pb-212	pCi/g	0.390	0.0671	0.0833	1.96	0.0305		0.0667		30
160-43230-11	SAMP	FSS-163-082621	Soil	Eu-154	pCi/g	0.0244	0.0767	0.0767	1.96	0.0419	U	0.0881	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Th-232	pCi/g	0.368	0.106	0.112	1.96	0.0495		0.121		30
160-43230-12	SAMP	FSS-164-082621	Soil	Cs-137	pCi/g	0.170	0.0453	0.0484	1.96	0.00733		0.0232		30
160-43230-12	SAMP	FSS-164-082621	Soil	Co-60	pCi/g	-0.0224	0.0872	0.0873	1.96	0.0431	U	0.0983	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	K-40	pCi/g	3.80	0.812	0.894	1.96	0.105		0.333		30
160-43230-12	SAMP	FSS-164-082621	Soil	Na-22	pCi/g	0.0347	0.024	0.0243	1.96	0.0101		0.0320		30
160-43230-12	SAMP	FSS-164-082621	Soil	Zn-65	pCi/g	0.00	0.0215	0.0215	1.96	0.104	U	0.228	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Ra-226	pCi/g	0.416	0.136	0.142	1.96	0.0570		0.129		30
160-43230-12	SAMP	FSS-164-082621	Soil	Ac-228	pCi/g	0.525	0.150	0.159	1.96	0.0272		0.0859		30
160-43230-12	SAMP	FSS-164-082621	Soil	Eu-155	pCi/g	0.0171	0.0516	0.0517	1.96	0.252	U	0.516	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Am-241	pCi/g	-0.0119	0.156	0.156	1.96	0.130	U	0.270	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Eu-152	pCi/g	0.0941	0.0512	0.052	1.96	0.0822		0.173	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Bi-214	pCi/g	0.416	0.136	0.142	1.96	0.0570		0.129		30
160-43230-12	SAMP	FSS-164-082621	Soil	Bi-212	pCi/g	0.457	0.765	0.766	1.96	0.605	U	1.31	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Pb-214	pCi/g	0.331	0.0974	0.103	1.96	0.0442		0.100		30
160-43230-12	SAMP	FSS-164-082621	Soil	Pb-212	pCi/g	0.417	0.0871	0.0969	1.96	0.0450		0.0978		30
160-43230-12	SAMP	FSS-164-082621	Soil	Eu-154	pCi/g	0.0316	0.0675	0.0675	1.96	0.0550	U	0.116	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Th-232	pCi/g	0.525	0.150	0.159	1.96	0.0272		0.0859		30
160-43230-13	SAMP	FSS-165-082621	Soil	Cs-137	pCi/g	0.129	0.0412	0.0432	1.96	0.0134		0.0335		30
160-43230-13	SAMP	FSS-165-082621	Soil	Co-60	pCi/g	0.0168	0.00949	0.00963	1.96	0.0203	U	0.0504	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	K-40	pCi/g	3.17	0.670	0.741	1.96	0.0858		0.272		30
160-43230-13	SAMP	FSS-165-082621	Soil	Na-22	pCi/g	0.0118	0.0265	0.0265	1.96	0.0196	U	0.0487	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Zn-65	pCi/g	0.0422	0.0813	0.0814	1.96	0.0629	U	0.143	U	30

160-43230-13	SAMP	FSS-165-082621	Soil	Ra-226	pCi/g	0.249	0.072	0.0763	1.96	0.0184		0.0485		30
160-43230-13	SAMP	FSS-165-082621	Soil	Ac-228	pCi/g	0.425	0.117	0.125	1.96	0.0217		0.0688		30
160-43230-13	SAMP	FSS-165-082621	Soil	Eu-155	pCi/g	-0.0150	0.209	0.209	1.96	0.175	U	0.360	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Am-241	pCi/g	-0.0641	0.140	0.140	1.96	0.115	U	0.239	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Eu-152	pCi/g	0.0601	0.0965	0.0967	1.96	0.0680	U	0.143	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Bi-214	pCi/g	0.249	0.0720	0.0763	1.96	0.0184		0.0485		30
160-43230-13	SAMP	FSS-165-082621	Soil	Bi-212	pCi/g	-0.186	0.543	0.544	1.96	0.440	U	0.961	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Pb-214	pCi/g	0.340	0.0675	0.0758	1.96	0.0143		0.0383		30
160-43230-13	SAMP	FSS-165-082621	Soil	Pb-212	pCi/g	0.394	0.067	0.0836	1.96	0.0254		0.0572		30
160-43230-13	SAMP	FSS-165-082621	Soil	Eu-154	pCi/g	0.0500	0.0349	0.0353	1.96	0.0432		0.0911	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Th-232	pCi/g	0.425	0.117	0.125	1.96	0.0217		0.0688		30
160-43230-14	SAMP	FSS-166-082621	Soil	Cs-137	pCi/g	0.0309	0.0577	0.0578	1.96	0.0457	U	0.0999	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Co-60	pCi/g	-0.00143	0.0512	0.0512	1.96	0.0107	U	0.0339	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	K-40	pCi/g	3.61	0.884	0.955	1.96	0.305		0.735		30
160-43230-14	SAMP	FSS-166-082621	Soil	Na-22	pCi/g	0.0267	0.0213	0.0215	1.96	0.0104		0.0327	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Zn-65	pCi/g	-0.0279	0.154	0.154	1.96	0.127	U	0.276	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Ra-226	pCi/g	0.491	0.142	0.151	1.96	0.0543		0.123		30
160-43230-14	SAMP	FSS-166-082621	Soil	Ac-228	pCi/g	0.289	0.226	0.228	1.96	0.116		0.264		30
160-43230-14	SAMP	FSS-166-082621	Soil	Eu-155	pCi/g	0.0665	0.131	0.131	1.96	0.183	U	0.377	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Am-241	pCi/g	0.0637	0.159	0.159	1.96	0.131	U	0.272	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Eu-152	pCi/g	0.019	0.0141	0.0143	1.96	0.0925	U	0.194	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Bi-214	pCi/g	0.491	0.142	0.151	1.96	0.0543		0.123		30
160-43230-14	SAMP	FSS-166-082621	Soil	Bi-212	pCi/g	0.768	0.336	0.345	1.96	0.0894		0.283		30
160-43230-14	SAMP	FSS-166-082621	Soil	Pb-214	pCi/g	0.275	0.0968	0.101	1.96	0.0591		0.131		30
160-43230-14	SAMP	FSS-166-082621	Soil	Pb-212	pCi/g	0.420	0.0846	0.100	1.96	0.0400		0.0882		30
160-43230-14	SAMP	FSS-166-082621	Soil	Eu-154	pCi/g	-0.0104	0.0809	0.0809	1.96	0.0675	U	0.141	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Th-232	pCi/g	0.289	0.226	0.228	1.96	0.116		0.264		30
160-43230-15	SAMP	FSS-167-082621	Soil	Cs-137	pCi/g	-0.00184	0.0279	0.0279	1.96	0.0290	U	0.0643	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Co-60	pCi/g	-0.0324	0.0762	0.0763	1.96	0.0372	U	0.0835	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	K-40	pCi/g	2.80	0.658	0.715	1.96	0.213		0.517		30
160-43230-15	SAMP	FSS-167-082621	Soil	Na-22	pCi/g	0.0054	0.0313	0.0313	1.96	0.0254	U	0.0596	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Zn-65	pCi/g	0.00619	0.0976	0.0976	1.96	0.0814	U	0.178	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Ra-226	pCi/g	0.272	0.078	0.0827	1.96	0.0309		0.0726		30
160-43230-15	SAMP	FSS-167-082621	Soil	Ac-228	pCi/g	0.226	0.148	0.150	1.96	0.0678		0.159		30
160-43230-15	SAMP	FSS-167-082621	Soil	Eu-155	pCi/g	0.0216	0.0667	0.0668	1.96	0.0861	U	0.181	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Am-241	pCi/g	0.0471	0.0967	0.0968	1.96	0.0598	U	0.127	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Eu-152	pCi/g	0.0616	0.0998	0.100	1.96	0.0599		0.126	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Bi-214	pCi/g	0.272	0.078	0.0827	1.96	0.0309		0.0726		30
160-43230-15	SAMP	FSS-167-082621	Soil	Bi-212	pCi/g	0.00	0.334	0.334	1.96	0.365	U	0.804	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Pb-214	pCi/g	0.330	0.084	0.0905	1.96	0.0334		0.0757		30
160-43230-15	SAMP	FSS-167-082621	Soil	Pb-212	pCi/g	0.380	0.0643	0.0803	1.96	0.0257		0.0573		30
160-43230-15	SAMP	FSS-167-082621	Soil	Eu-154	pCi/g	0.113	0.0434	0.0449	1.96	0.0434		0.0913		30
160-43230-15	SAMP	FSS-167-082621	Soil	Th-232	pCi/g	0.226	0.148	0.150	1.96	0.0678		0.159		30
160-43230-16	SAMP	FSS-168-082621	Soil	Cs-137	pCi/g	0.026	0.0514	0.0515	1.96	0.0402	U	0.0901	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Co-60	pCi/g	-0.0557	0.101	0.102	1.96	0.0487	U	0.111	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	K-40	pCi/g	6.17	1.10	1.26	1.96	0.119		0.376		30
160-43230-16	SAMP	FSS-168-082621	Soil	Na-22	pCi/g	-0.0114	0.048	0.048	1.96	0.0384	U	0.0901	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Zn-65	pCi/g	0.00	0.0171	0.0171	1.96	0.141	U	0.306	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Ra-226	pCi/g	0.501	0.124	0.134	1.96	0.0455		0.108		30
160-43230-16	SAMP	FSS-168-082621	Soil	Ac-228	pCi/g	0.254	0.237	0.238	1.96	0.137		0.31	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Eu-155	pCi/g	-0.00746	0.0171	0.0171	1.96	0.288	U	0.589	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Am-241	pCi/g	0.0630	0.155	0.156	1.96	0.128	U	0.267	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Eu-152	pCi/g	0.0707	0.214	0.214	1.96	0.100	U	0.210	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Bi-214	pCi/g	0.501	0.124	0.134	1.96	0.0455		0.108		30
160-43230-16	SAMP	FSS-168-082621	Soil	Bi-212	pCi/g	-0.0143	0.679	0.679	1.96	0.569	U	1.25	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Pb-214	pCi/g	0.484	0.130	0.139	1.96	0.0598		0.133		30
160-43230-16	SAMP	FSS-168-082621	Soil	Pb-212	pCi/g	0.492	0.102	0.114	1.96	0.0545		0.118		30
160-43230-16	SAMP	FSS-168-082621	Soil	Eu-154	pCi/g	0.0687	0.114	0.114	1.96	0.0673		0.141	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Th-232	pCi/g	0.254	0.237	0.238	1.96	0.137		0.310	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Cs-137	pCi/g	0.204	0.0604	0.0639	1.96	0.0194		0.047		30
160-43230-17	SAMP	FSS-169-082621	Soil	Co-60	pCi/g	-0.00138	0.0503	0.0503	1.96	0.0104	U	0.0328	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	K-40	pCi/g	4.92	0.989	1.11	1.96	0.295		0.711		30
160-43230-17	SAMP	FSS-169-082621	Soil	Na-22	pCi/g	0.043	0.0266	0.027	1.96	0.0100		0.0317		30

160-43230-17	SAMP	FSS-169-082621	Soil	Zn-65	pCi/g	0.00	0.015	0.015	1.96	0.113	U	0.247	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Ra-226	pCi/g	0.320	0.0993	0.105	1.96	0.0431		0.101		30
160-43230-17	SAMP	FSS-169-082621	Soil	Ac-228	pCi/g	0.335	0.131	0.135	1.96	0.0703		0.172		30
160-43230-17	SAMP	FSS-169-082621	Soil	Eu-155	pCi/g	-0.0738	0.129	0.13	1.96	0.157	U	0.325	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Am-241	pCi/g	-0.0671	0.168	0.168	1.96	0.139	U	0.288	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Eu-152	pCi/g	0.122	0.0798	0.0808	1.96	0.0754		0.159	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Bi-214	pCi/g	0.320	0.0993	0.105	1.96	0.0431		0.101		30
160-43230-17	SAMP	FSS-169-082621	Soil	Bi-212	pCi/g	0.285	0.616	0.617	1.96	0.489	U	1.08	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Pb-214	pCi/g	0.303	0.0922	0.0972	1.96	0.0416		0.0950		30
160-43230-17	SAMP	FSS-169-082621	Soil	Pb-212	pCi/g	0.364	0.0821	0.0942	1.96	0.0431		0.0940		30
160-43230-17	SAMP	FSS-169-082621	Soil	Eu-154	pCi/g	0.0699	0.116	0.116	1.96	0.0568		0.120	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Th-232	pCi/g	0.335	0.131	0.135	1.96	0.0703		0.172		30
160-43230-18	SAMP	FSS-170-082621	Soil	Cs-137	pCi/g	0.0197	0.0382	0.0383	1.96	0.0297	U	0.067	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Co-60	pCi/g	0.0548	0.0305	0.0310	1.96	0.00948		0.0300		30
160-43230-18	SAMP	FSS-170-082621	Soil	K-40	pCi/g	3.11	0.773	0.834	1.96	0.271		0.653		30
160-43230-18	SAMP	FSS-170-082621	Soil	Na-22	pCi/g	-0.0236	0.0487	0.0488	1.96	0.0378	U	0.0862	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Zn-65	pCi/g	0.00	0.0388	0.0388	1.96	0.106	U	0.231	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Ra-226	pCi/g	0.236	0.0885	0.0917	1.96	0.0388		0.0908		30
160-43230-18	SAMP	FSS-170-082621	Soil	Ac-228	pCi/g	0.355	0.111	0.116	1.96	0.0585		0.145		30
160-43230-18	SAMP	FSS-170-082621	Soil	Eu-155	pCi/g	0.00438	0.0574	0.0574	1.96	0.109	U	0.229	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Am-241	pCi/g	0.021	0.107	0.107	1.96	0.0708	U	0.150	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Eu-152	pCi/g	-0.0115	0.0229	0.0229	1.96	0.0720	U	0.151	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Bi-214	pCi/g	0.236	0.0885	0.0917	1.96	0.0388		0.0908		30
160-43230-18	SAMP	FSS-170-082621	Soil	Bi-212	pCi/g	0.00	0.133	0.133	1.96	0.361	U	0.813	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Pb-214	pCi/g	0.237	0.0824	0.0858	1.96	0.0365		0.0839		30
160-43230-18	SAMP	FSS-170-082621	Soil	Pb-212	pCi/g	0.250	0.0675	0.0745	1.96	0.0368		0.0809		30
160-43230-18	SAMP	FSS-170-082621	Soil	Eu-154	pCi/g	0.130	0.0557	0.0573	1.96	0.0503		0.106		30
160-43230-18	SAMP	FSS-170-082621	Soil	Th-232	pCi/g	0.355	0.111	0.116	1.96	0.0585		0.145		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Cs-137	pCi/g	0.01424	0.0305	0.0305	1.96	0.0233	U	0.0545	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Co-60	pCi/g	0.002908	0.0364	0.0364	1.96	0.0235	U	0.0584	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	K-40	pCi/g	2.517	0.729	0.771	1.96	0.2809		0.677		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Na-22	pCi/g	0.00	0.0114	0.0114	1.96	0.00954	U	0.0302	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Zn-65	pCi/g	-0.06191	0.121	0.121	1.96	0.0957	U	0.211	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Ra-226	pCi/g	0.04511	0.139	0.139	1.96	0.115	U	0.244	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Ac-228	pCi/g	0.2917	0.159	0.162	1.96	0.0731		0.176		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Eu-155	pCi/g	0.03189	0.0862	0.0863	1.96	0.147	U	0.305	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Am-241	pCi/g	-0.04231	0.153	0.153	1.96	0.127	U	0.263	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Eu-152	pCi/g	0.1538	0.0867	0.0881	1.96	0.0631		0.134		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Bi-214	pCi/g	0.04511	0.139	0.139	1.96	0.115	U	0.244	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Bi-212	pCi/g	-0.3994	0.803	0.804	1.96	0.646	U	1.39	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Pb-214	pCi/g	0.2727	0.0807	0.0853	1.96	0.0380		0.0873		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Pb-212	pCi/g	0.2663	0.072	0.0795	1.96	0.0404		0.0884		30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Eu-154	pCi/g	0.03583	0.0487	0.0488	1.96	0.0529	U	0.111	U	30
160-43230-18 DU	QC_DUP	160-43230-18 DU	Soil	Th-232	pCi/g	0.2917	0.159	0.162	1.96	0.0731		0.176		30
160-43230-2	SAMP	FSS-154-082621	Soil	Cs-137	pCi/g	0.146	0.0436	0.0460	1.96	0.00791		0.0250		30
160-43230-2	SAMP	FSS-154-082621	Soil	Co-60	pCi/g	-0.0355	0.0791	0.0792	1.96	0.0379	U	0.0890	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	K-40	pCi/g	4.58	0.926	1.03	1.96	0.114		0.359		30
160-43230-2	SAMP	FSS-154-082621	Soil	Na-22	pCi/g	-0.00312	0.0317	0.0317	1.96	0.0259	U	0.0645	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Zn-65	pCi/g	0.00	0.0164	0.0164	1.96	0.1066	U	0.236	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Ra-226	pCi/g	0.330	0.115	0.120	1.96	0.0492		0.114		30
160-43230-2	SAMP	FSS-154-082621	Soil	Ac-228	pCi/g	0.505	0.140	0.149	1.96	0.0507		0.135		30
160-43230-2	SAMP	FSS-154-082621	Soil	Eu-155	pCi/g	-0.0964	0.334	0.334	1.96	0.279	U	0.570	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Am-241	pCi/g	0.0601	0.156	0.156	1.96	0.129	U	0.268	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Eu-152	pCi/g	0.0605	0.101	0.102	1.96	0.0789	U	0.167	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Bi-214	pCi/g	0.330	0.115	0.120	1.96	0.0492		0.114		30
160-43230-2	SAMP	FSS-154-082621	Soil	Bi-212	pCi/g	-0.129	0.817	0.818	1.96	0.677	U	1.46	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Pb-214	pCi/g	0.391	0.134	0.140	1.96	0.0613		0.136		30
160-43230-2	SAMP	FSS-154-082621	Soil	Pb-212	pCi/g	0.394	0.089	0.0977	1.96	0.0467		0.102		30
160-43230-2	SAMP	FSS-154-082621	Soil	Eu-154	pCi/g	0.0741	0.136	0.136	1.96	0.0559		0.118	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Th-232	pCi/g	0.505	0.140	0.149	1.96	0.0507		0.135		30
160-43230-3	SAMP	FSS-155-082621	Soil	Cs-137	pCi/g	0.0832	0.0316	0.0327	1.96	0.00969		0.0251		30
160-43230-3	SAMP	FSS-155-082621	Soil	Co-60	pCi/g	0.0343	0.0203	0.0205	1.96	0.00726		0.0230		30
160-43230-3	SAMP	FSS-155-082621	Soil	K-40	pCi/g	4.62	0.747	0.879	1.96	0.0733		0.232		30

160-43230-3	SAMP	FSS-155-082621	Soil	Na-22	pCi/g	0.0181	0.0144	0.0146	1.96	0.00701		0.0222	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Zn-65	pCi/g	0.00	0.0148	0.0148	1.96	0.0836	U	0.182	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Ra-226	pCi/g	0.249	0.0814	0.0853	1.96	0.0379		0.0858		30
160-43230-3	SAMP	FSS-155-082621	Soil	Ac-228	pCi/g	0.470	0.120	0.129	1.96	0.0186		0.0587		30
160-43230-3	SAMP	FSS-155-082621	Soil	Eu-155	pCi/g	0.00	0.0629	0.0629	1.96	0.108	U	0.223	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Am-241	pCi/g	-0.0292	0.104	0.104	1.96	0.0859	U	0.179	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Eu-152	pCi/g	0.00143	0.00245	0.00245	1.96	0.0740	U	0.154	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Bi-214	pCi/g	0.249	0.0814	0.0853	1.96	0.0379		0.0858		30
160-43230-3	SAMP	FSS-155-082621	Soil	Bi-212	pCi/g	0.206	0.432	0.432	1.96	0.343	U	0.755	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Pb-214	pCi/g	0.192	0.068	0.0708	1.96	0.0710		0.150		30
160-43230-3	SAMP	FSS-155-082621	Soil	Pb-212	pCi/g	0.450	0.0634	0.0853	1.96	0.0196		0.0446		30
160-43230-3	SAMP	FSS-155-082621	Soil	Eu-154	pCi/g	0.0671	0.0682	0.0686	1.96	0.0473		0.0986	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Th-232	pCi/g	0.470	0.120	0.129	1.96	0.0186		0.0587		30
160-43230-4	SAMP	FSS-156-082621	Soil	Cs-137	pCi/g	0.812	0.128	0.152	1.96	0.0302		0.0725		30
160-43230-4	SAMP	FSS-156-082621	Soil	Co-60	pCi/g	-0.03	0.0973	0.0973	1.96	0.0489	U	0.115	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	K-40	pCi/g	10.4	1.69	1.99	1.96	0.411		0.997		30
160-43230-4	SAMP	FSS-156-082621	Soil	Na-22	pCi/g	0.0394	0.0502	0.0503	1.96	0.0334		0.0836	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Zn-65	pCi/g	-0.00616	0.145	0.145	1.96	0.2054	U	0.441	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Ra-226	pCi/g	1.06	0.206	0.233	1.96	0.0644		0.150		30
160-43230-4	SAMP	FSS-156-082621	Soil	Ac-228	pCi/g	1.24	0.323	0.346	1.96	0.144		0.333		30
160-43230-4	SAMP	FSS-156-082621	Soil	Eu-155	pCi/g	-0.137	0.169	0.169	1.96	0.288	U	0.592	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Am-241	pCi/g	0.023	0.255	0.255	1.96	0.213	U	0.440	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Eu-152	pCi/g	0.168	0.136	0.137	1.96	0.154		0.320	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Bi-214	pCi/g	1.06	0.206	0.233	1.96	0.0644		0.150		30
160-43230-4	SAMP	FSS-156-082621	Soil	Bi-212	pCi/g	2.20	0.673	0.709	1.96	0.125		0.395		30
160-43230-4	SAMP	FSS-156-082621	Soil	Pb-214	pCi/g	1.12	0.220	0.248	1.96	0.0869		0.191		30
160-43230-4	SAMP	FSS-156-082621	Soil	Pb-212	pCi/g	1.23	0.157	0.222	1.96	0.0574		0.126		30
160-43230-4	SAMP	FSS-156-082621	Soil	Eu-154	pCi/g	0.0655	0.0954	0.0956	1.96	0.113	U	0.234	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Th-232	pCi/g	1.24	0.323	0.346	1.96	0.144		0.333		30
160-43230-5	SAMP	FSS-157-082621	Soil	Cs-137	pCi/g	0.249	0.0626	0.0675	1.96	0.0228		0.0529		30
160-43230-5	SAMP	FSS-157-082621	Soil	Co-60	pCi/g	0.0116	0.0263	0.0264	1.96	0.0219	U	0.0544	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	K-40	pCi/g	5.68	0.988	1.14	1.96	0.266		0.639		30
160-43230-5	SAMP	FSS-157-082621	Soil	Na-22	pCi/g	0.0685	0.0316	0.0323	1.96	0.00887		0.0280		30
160-43230-5	SAMP	FSS-157-082621	Soil	Zn-65	pCi/g	0.0115	0.129	0.129	1.96	0.107	U	0.233	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Ra-226	pCi/g	0.593	0.118	0.132	1.96	0.0406		0.0937		30
160-43230-5	SAMP	FSS-157-082621	Soil	Ac-228	pCi/g	0.641	0.136	0.151	1.96	0.0234		0.0742		30
160-43230-5	SAMP	FSS-157-082621	Soil	Eu-155	pCi/g	-0.000913	0.192	0.192	1.96	0.235	U	0.480	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Am-241	pCi/g	0.0524	0.164	0.164	1.96	0.136	U	0.281	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Eu-152	pCi/g	0.100	0.247	0.247	1.96	0.0831		0.174	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Bi-214	pCi/g	0.593	0.118	0.132	1.96	0.0406		0.0937		30
160-43230-5	SAMP	FSS-157-082621	Soil	Bi-212	pCi/g	0.405	0.675	0.676	1.96	0.535	U	1.16	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Pb-214	pCi/g	0.528	0.112	0.124	1.96	0.0438		0.0981		30
160-43230-5	SAMP	FSS-157-082621	Soil	Pb-212	pCi/g	0.584	0.0934	0.119	1.96	0.0458		0.0985		30
160-43230-5	SAMP	FSS-157-082621	Soil	Eu-154	pCi/g	0.033	0.089	0.0891	1.96	0.0615	U	0.128	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Th-232	pCi/g	0.641	0.136	0.151	1.96	0.0234		0.0742		30
160-43230-6	SAMP	FSS-158-082621	Soil	Cs-137	pCi/g	0.117	0.056	0.0572	1.96	0.0219		0.0535		30
160-43230-6	SAMP	FSS-158-082621	Soil	Co-60	pCi/g	-0.0304	0.0991	0.0992	1.96	0.0487	U	0.111	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	K-40	pCi/g	2.81	0.743	0.793	1.96	0.119		0.377		30
160-43230-6	SAMP	FSS-158-082621	Soil	Na-22	pCi/g	0.0114	0.0355	0.0355	1.96	0.0272	U	0.0677	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Zn-65	pCi/g	0.0500	0.114	0.114	1.96	0.0896	U	0.203	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Ra-226	pCi/g	0.275	0.130	0.132	1.96	0.0623		0.141		30
160-43230-6	SAMP	FSS-158-082621	Soil	Ac-228	pCi/g	0.408	0.144	0.149	1.96	0.0307		0.0971		30
160-43230-6	SAMP	FSS-158-082621	Soil	Eu-155	pCi/g	0.0323	0.106	0.106	1.96	0.260	U	0.533	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Am-241	pCi/g	0.0422	0.154	0.154	1.96	0.128	U	0.266	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Eu-152	pCi/g	0.0824	0.142	0.142	1.96	0.0805		0.171	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Bi-214	pCi/g	0.275	0.130	0.132	1.96	0.0623		0.141		30
160-43230-6	SAMP	FSS-158-082621	Soil	Bi-212	pCi/g	-0.216	0.759	0.759	1.96	0.618	U	1.35	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Pb-214	pCi/g	0.360	0.117	0.123	1.96	0.0551		0.124		30
160-43230-6	SAMP	FSS-158-082621	Soil	Pb-212	pCi/g	0.264	0.0774	0.0819	1.96	0.0424		0.0937		30
160-43230-6	SAMP	FSS-158-082621	Soil	Eu-154	pCi/g	0.0898	0.0455	0.0464	1.96	0.0579		0.123	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Th-232	pCi/g	0.408	0.144	0.149	1.96	0.0307		0.0971		30
160-43230-7	SAMP	FSS-159-082621	Soil	Cs-137	pCi/g	0.0402	0.0706	0.0708	1.96	0.0567	U	0.121	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Co-60	pCi/g	0.0475	0.0289	0.0293	1.96	0.0097		0.0306		30

160-43230-7	SAMP	FSS-159-082621	Soil	K-40	pCi/g	5.18	0.971	1.10	1.96	0.276		0.666		30
160-43230-7	SAMP	FSS-159-082621	Soil	Na-22	pCi/g	0.0321	0.0222	0.0224	1.96	0.0093		0.0295		30
160-43230-7	SAMP	FSS-159-082621	Soil	Zn-65	pCi/g	0.0143	0.136	0.136	1.96	0.113	U	0.245	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Ra-226	pCi/g	0.335	0.105	0.111	1.96	0.0443		0.102		30
160-43230-7	SAMP	FSS-159-082621	Soil	Ac-228	pCi/g	0.705	0.159	0.174	1.96	0.0249		0.0786		30
160-43230-7	SAMP	FSS-159-082621	Soil	Eu-155	pCi/g	0.0520	0.111	0.111	1.96	0.142	U	0.295	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Am-241	pCi/g	0.0470	0.126	0.127	1.96	0.0829	U	0.175	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Eu-152	pCi/g	0.0802	0.135	0.135	1.96	0.0720		0.152	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Bi-214	pCi/g	0.335	0.105	0.111	1.96	0.0443		0.102		30
160-43230-7	SAMP	FSS-159-082621	Soil	Bi-212	pCi/g	0.311	0.551	0.552	1.96	0.430	U	0.954	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Pb-214	pCi/g	0.437	0.109	0.118	1.96	0.0413		0.0936		30
160-43230-7	SAMP	FSS-159-082621	Soil	Pb-212	pCi/g	0.406	0.086	0.100	1.96	0.0466		0.101		30
160-43230-7	SAMP	FSS-159-082621	Soil	Eu-154	pCi/g	0.0526	0.0379	0.0383	1.96	0.0519		0.109	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Th-232	pCi/g	0.705	0.159	0.174	1.96	0.0249		0.0786		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Cs-137	pCi/g	0.00	0.0244	0.0244	1.96	0.0355	U	0.0771	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Co-60	pCi/g	0.004441	0.0372	0.0372	1.96	0.0185	U	0.0460	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	K-40	pCi/g	6.62	0.924	1.14	1.96	0.0783		0.248		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Na-22	pCi/g	0.02301	0.0271	0.0272	1.96	0.0178		0.0444	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Zn-65	pCi/g	0.00	0.0317	0.0317	1.96	0.0987	U	0.213	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Ra-226	pCi/g	0.4007	0.0955	0.104	1.96	0.0361		0.0829		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Ac-228	pCi/g	0.4722	0.123	0.131	1.96	0.0198		0.0627		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Eu-155	pCi/g	-0.07656	0.216	0.216	1.96	0.179	U	0.367	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Am-241	pCi/g	0.01341	0.124	0.124	1.96	0.104	U	0.215	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Eu-152	pCi/g	0.09656	0.134	0.135	1.96	0.0607		0.128	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Bi-214	pCi/g	0.4007	0.0955	0.104	1.96	0.0361		0.0829		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Bi-212	pCi/g	0.9352	0.314	0.328	1.96	0.0641		0.203		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Pb-214	pCi/g	0.3336	0.0715	0.0791	1.96	0.0391		0.0869		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Pb-212	pCi/g	0.481	0.0712	0.0937	1.96	0.0278		0.0614		30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Eu-154	pCi/g	-0.03643	0.0637	0.0639	1.96	0.0521	U	0.109	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Th-232	pCi/g	0.4722	0.123	0.131	1.96	0.0198		0.0627		30
160-43230-8	SAMP	FSS-160-082621	Soil	Cs-137	pCi/g	0.413	0.0667	0.0789	1.96	0.00654		0.0207		30
160-43230-8	SAMP	FSS-160-082621	Soil	Co-60	pCi/g	-0.0226	0.0612	0.0612	1.96	0.0398	U	0.0905	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	K-40	pCi/g	4.300	0.887	0.986	1.96	0.271		0.654		30
160-43230-8	SAMP	FSS-160-082621	Soil	Na-22	pCi/g	0.0249	0.0324	0.0325	1.96	0.0218		0.0543	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Zn-65	pCi/g	0.00	0.0137	0.0137	1.96	0.111	U	0.241	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Ra-226	pCi/g	0.417	0.117	0.125	1.96	0.0464		0.106		30
160-43230-8	SAMP	FSS-160-082621	Soil	Ac-228	pCi/g	0.691	0.148	0.163	1.96	0.0244		0.0772		30
160-43230-8	SAMP	FSS-160-082621	Soil	Eu-155	pCi/g	-0.0738	0.206	0.206	1.96	0.171	U	0.351	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Am-241	pCi/g	-0.0631	0.142	0.142	1.96	0.0928	U	0.194	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Eu-152	pCi/g	0.0755	0.160	0.160	1.96	0.0636		0.135	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Bi-214	pCi/g	0.417	0.117	0.125	1.96	0.0464		0.106		30
160-43230-8	SAMP	FSS-160-082621	Soil	Bi-212	pCi/g	0.000000065	0.666	0.666	1.96	0.560	U	1.21	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Pb-214	pCi/g	0.391	0.109	0.116	1.96	0.0464		0.104		30
160-43230-8	SAMP	FSS-160-082621	Soil	Pb-212	pCi/g	0.517	0.0867	0.109	1.96	0.0388		0.0848		30
160-43230-8	SAMP	FSS-160-082621	Soil	Eu-154	pCi/g	0.136	0.0568	0.0585	1.96	0.0565		0.118		30
160-43230-8	SAMP	FSS-160-082621	Soil	Th-232	pCi/g	0.691	0.148	0.163	1.96	0.0244		0.0772		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Cs-137	pCi/g	0.4271	0.0759	0.0875	1.96	0.0193		0.0465		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Co-60	pCi/g	0.004339	0.0627	0.0627	1.96	0.0327	U	0.077	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	K-40	pCi/g	3.63	0.845	0.920	1.96	0.281		0.678		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Na-22	pCi/g	-0.02323	0.0417	0.0418	1.96	0.0312	U	0.0735	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Zn-65	pCi/g	0.00	0.0640	0.0640	1.96	0.0868	U	0.193	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Ra-226	pCi/g	0.3715	0.105	0.111	1.96	0.0428		0.0993		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Ac-228	pCi/g	0.5457	0.153	0.163	1.96	0.0483		0.126		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Eu-155	pCi/g	0.1859	0.140	0.141	1.96	0.0768		0.164		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Am-241	pCi/g	0.05595	0.141	0.141	1.96	0.116	U	0.241	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Eu-152	pCi/g	0.02677	0.0824	0.0824	1.96	0.0907	U	0.189	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Bi-214	pCi/g	0.3715	0.105	0.111	1.96	0.0428		0.0993		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Bi-212	pCi/g	0.4939	1.12	1.12	1.96	0.914	U	1.92	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Pb-214	pCi/g	0.3997	0.105	0.113	1.96	0.0490		0.109		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Pb-212	pCi/g	0.4949	0.0883	0.108	1.96	0.0419		0.0914		30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Eu-154	pCi/g	0.03847	0.112	0.112	1.96	0.0615	U	0.129	U	30
160-43230-8 DU	QC_DUP	160-43230-8 DU	Soil	Th-232	pCi/g	0.5457	0.153	0.163	1.96	0.0483		0.126		30
160-43230-9	SAMP	FSS-161-082621	Soil	Cs-137	pCi/g	0.0326	0.0636	0.0637	1.96	0.0511	U	0.110	U	30

160-43230-9	SAMP	FSS-161-082621	Soil	Co-60	pCi/g	-0.0120	0.0879	0.0879	1.96	0.0311	U	0.0730	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	K-40	pCi/g	4.98	0.939	1.06	1.96	0.267		0.643		30
160-43230-9	SAMP	FSS-161-082621	Soil	Na-22	pCi/g	-0.0143	0.0381	0.0381	1.96	0.0296	U	0.0697	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Zn-65	pCi/g	0.00	0.0192	0.0192	1.96	0.0825	U	0.184	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Ra-226	pCi/g	0.695	0.138	0.155	1.96	0.0475		0.108		30
160-43230-9	SAMP	FSS-161-082621	Soil	Ac-228	pCi/g	0.701	0.141	0.157	1.96	0.0458		0.120		30
160-43230-9	SAMP	FSS-161-082621	Soil	Eu-155	pCi/g	0.0336	0.101	0.101	1.96	0.158	U	0.326	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Am-241	pCi/g	-0.0744	0.195	0.195	1.96	0.162	U	0.333	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Eu-152	pCi/g	0.111	0.209	0.209	1.96	0.130	U	0.276	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Bi-214	pCi/g	0.695	0.138	0.155	1.96	0.0475		0.108		30
160-43230-9	SAMP	FSS-161-082621	Soil	Bi-212	pCi/g	0.449	0.803	0.804	1.96	0.6441	U	1.38	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Pb-214	pCi/g	0.725	0.147	0.164	1.96	0.0579		0.127		30
160-43230-9	SAMP	FSS-161-082621	Soil	Pb-212	pCi/g	0.479	0.0891	0.108	1.96	0.0465		0.100		30
160-43230-9	SAMP	FSS-161-082621	Soil	Eu-154	pCi/g	0.0174	0.0304	0.0304	1.96	0.0640	U	0.133	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Th-232	pCi/g	0.701	0.141	0.157	1.96	0.0458		0.120		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Cs-137	pCi/g	29.49	0.718	3.04	1.96	0.122		0.254		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Co-60	pCi/g	9.061	0.335	0.946	1.96	0.0665		0.149		30
LCS 160-525011/2-A	QC_LCS	LCS 160-525011/2-A	Soil	Am-241	pCi/g	103.6	1.66	11.9	1.96	0.598		1.21		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Cs-137	pCi/g	26.7	0.611	2.79	1.96	0.0674		0.144		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Co-60	pCi/g	8.653	0.299	0.902	1.96	0.0388		0.0916		30
LCS 160-525244/2-A	QC_LCS	LCS 160-525244/2-A	Soil	Am-241	pCi/g	101.9	1.41	10.5	1.96	0.506		1.02		30
LCS 160-525251/2-A	QC_LCS	LCS 160-525251/2-A	Soil	Cs-137	pCi/g	26.59	0.564	2.77	1.96	0.0800		0.168		30
LCS 160-525251/2-A	QC_LCS	LCS 160-525251/2-A	Soil	Co-60	pCi/g	8.258	0.255	0.852	1.96	0.0097		0.0308		30
LCS 160-525251/2-A	QC_LCS	LCS 160-525251/2-A	Soil	Am-241	pCi/g	98.73	1.43	10.1	1.96	0.503		1.02		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Cs-137	pCi/g	0.00251	0.0422	0.0422	1.96	0.035	U	0.0792	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Co-60	pCi/g	0.01081	0.01	0.0101	1.96	0.0114	U	0.0362	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	K-40	pCi/g	0.1353	0.414	0.415	1.96	0.311	U	0.757	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Na-22	pCi/g	0.03319	0.0246	0.0248	1.96	0.0110		0.0349	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Zn-65	pCi/g	0.00	0.0404	0.0404	1.96	0.106	U	0.235	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Ra-226	pCi/g	-0.03458	0.113	0.113	1.96	0.0954	U	0.207	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Ac-228	pCi/g	-0.03204	0.149	0.149	1.96	0.0748	U	0.184	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-155	pCi/g	0.00	0.0283	0.0283	1.96	0.144	U	0.300	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Am-241	pCi/g	0.0903	0.0557	0.0564	1.96	0.0259		0.0624		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-152	pCi/g	0.08791	0.0478	0.0486	1.96	0.0579		0.125	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Bi-214	pCi/g	-0.03458	0.113	0.113	1.96	0.0954	U	0.207	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Bi-212	pCi/g	-0.2904	0.570	0.571	1.96	0.445	U	0.999	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Pb-214	pCi/g	0.1365	0.082	0.0832	1.96	0.0530		0.119		30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Pb-212	pCi/g	0.004431	0.056	0.056	1.96	0.0463	U	0.101	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Eu-154	pCi/g	0.02761	0.0579	0.058	1.96	0.0303	U	0.067	U	30
MB 160-525011/1-A	QC_BLK	MB 160-525011/1-A	Soil	Th-232	pCi/g	-0.03204	0.149	0.149	1.96	0.0748	U	0.184	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Cs-137	pCi/g	-0.0275	0.0681	0.0681	1.96	0.0545	U	0.120	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Co-60	pCi/g	-0.001212	0.0649	0.0649	1.96	0.0339	U	0.0836	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	K-40	pCi/g	-0.4152	0.770	0.771	1.96	0.514	U	1.19	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Na-22	pCi/g	0.02822	0.0247	0.0249	1.96	0.0132		0.0416	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Zn-65	pCi/g	0.00	0.0197	0.0197	1.96	0.0937	U	0.215	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Ra-226	pCi/g	-0.08077	0.124	0.124	1.96	0.201	U	0.421	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Ac-228	pCi/g	0.04231	0.111	0.111	1.96	0.115	U	0.270	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-155	pCi/g	-0.07216	0.219	0.220	1.96	0.182	U	0.377	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Am-241	pCi/g	0.04333	0.0992	0.0993	1.96	0.0637	U	0.140	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-152	pCi/g	0.08254	0.117	0.117	1.96	0.0487		0.108	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Bi-214	pCi/g	-0.08077	0.124	0.124	1.96	0.201	U	0.421	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Bi-212	pCi/g	-0.341	0.733	0.734	1.96	0.579	U	1.29	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Pb-214	pCi/g	-0.0488	0.0629	0.0631	1.96	0.0928	U	0.201	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Pb-212	pCi/g	-0.04483	0.148	0.148	1.96	0.0971	U	0.205	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Eu-154	pCi/g	0.04157	0.0703	0.0704	1.96	0.0409		0.0893	U	30
MB 160-525244/1-A	QC_BLK	MB 160-525244/1-A	Soil	Th-232	pCi/g	0.04231	0.111	0.111	1.96	0.115	U	0.270	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Cs-137	pCi/g	-0.04901	0.0802	0.0804	1.96	0.0634	U	0.138	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Co-60	pCi/g	-0.04015	0.134	0.134	1.96	0.0469	U	0.110	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	K-40	pCi/g	-0.2975	0.787	0.788	1.96	0.514	U	1.19	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Na-22	pCi/g	0.00	0.0156	0.0156	1.96	0.0132	U	0.0416	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Zn-65	pCi/g	-0.0893	0.216	0.216	1.96	0.175	U	0.377	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Ra-226	pCi/g	0.06348	0.124	0.124	1.96	0.171	U	0.361	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Ac-228	pCi/g	0.01843	0.0999	0.0999	1.96	0.115	U	0.270	U	30

MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Eu-155	pCi/g	0.00	0.0327	0.0327	1.96	0.127	U	0.269	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Am-241	pCi/g	0.04132	0.0948	0.0949	1.96	0.0607	U	0.134	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Eu-152	pCi/g	0.03714	0.07	0.0701	1.96	0.0797	U	0.170	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Bi-214	pCi/g	0.06348	0.124	0.124	1.96	0.171	U	0.361	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Bi-212	pCi/g	-0.01624	0.565	0.565	1.96	0.473	U	1.08	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Pb-214	pCi/g	-0.0199	0.105	0.105	1.96	0.0888	U	0.193	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Pb-212	pCi/g	-0.03452	0.0833	0.0834	1.96	0.0834	U	0.177	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Eu-154	pCi/g	0.06926	0.0554	0.0559	1.96	0.0514		0.110	U	30
MB 160-525251/1-A	QC_BLK	MB 160-525251/1-A	Soil	Th-232	pCi/g	0.01843	0.0999	0.0999	1.96	0.115	U	0.270	U	30
160-43230-1	SAMP	FSS-153-082621	Soil	Ni-63	pCi/g	0.965	1.23	1.24	1.96	1.02	U	2.17	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Ni-63	pCi/g	0.765	1.02	1.02	1.96	0.830	U	1.73	U	60
160-43230-11	SAMP	FSS-163-082621	Soil	Ni-63	pCi/g	0.822	0.996	1.00	1.96	0.828	U	1.73	U	60
160-43230-11 DU	QC_DUP	160-43230-11 DU	Soil	Ni-63	pCi/g	0.7448	0.975	0.978	1.96	0.808	U	1.69	U	60
160-43230-12	SAMP	FSS-164-082621	Soil	Ni-63	pCi/g	1.20	1.16	1.16	1.96	0.946		2.02	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Ni-63	pCi/g	0.601	1.27	1.27	1.96	1.07	U	2.27	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Ni-63	pCi/g	2.10	1.53	1.54	1.96	1.20		2.56	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Ni-63	pCi/g	1.74	1.38	1.39	1.96	1.09		2.34	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Ni-63	pCi/g	1.42	1.26	1.27	1.96	1.02		2.17	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Ni-63	pCi/g	1.49	1.32	1.33	1.96	1.07		2.29	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Ni-63	pCi/g	1.70	1.29	1.30	1.96	1.04		2.21	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Ni-63	pCi/g	1.13	1.21	1.22	1.96	0.980		2.09	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Ni-63	pCi/g	1.35	1.26	1.27	1.96	1.01		2.17	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Ni-63	pCi/g	1.09	1.17	1.18	1.96	0.950		2.03	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Ni-63	pCi/g	0.498	1.18	1.18	1.96	1.01	U	2.15	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Ni-63	pCi/g	1.21	1.20	1.21	1.96	0.970		2.07	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Ni-63	pCi/g	0.836	1.53	1.53	1.96	1.31	U	2.79	U	30
160-43230-7 DU	QC_DUP	160-43230-7 DU	Soil	Ni-63	pCi/g	1.949	1.30	1.32	1.96	1.02		2.17	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Ni-63	pCi/g	1.12	1.37	1.37	1.96	1.12		2.39	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Ni-63	pCi/g	0.952	1.20	1.21	1.96	0.985	U	2.10	U	30
LCS 160-528330/2-A	QC_LCS	LCS 160-528330/2-A	Soil	Ni-63	pCi/g	19.26	2.25	2.98	1.96	1.07		2.29		30
LCS 160-529474/2-A	QC_LCS	LCS 160-529474/2-A	Soil	Ni-63	pCi/g	25.73	1.92	3.25	1.96	0.895		1.87		60
MB 160-528330/1-A	QC_BLK	MB 160-528330/1-A	Soil	Ni-63	pCi/g	1.791	1.20	1.21	1.96	0.928		1.98	U	30
MB 160-529474/1-A	QC_BLK	MB 160-529474/1-A	Soil	Ni-63	pCi/g	0.5437	1.14	1.14	1.96	0.959	U	2.00	U	60
160-43230-1	SAMP	FSS-153-082621	Soil	Pu-241	pCi/g	-1.72	1.56	1.57	1.96	1.40	U	2.99	U	30
160-43230-10	SAMP	FSS-162-082621	Soil	Pu-241	pCi/g	1.42	1.52	1.53	1.96	1.19		2.55	U	30
160-43230-10 DU	QC_DUP	160-43230-10 DU	Soil	Pu-241	pCi/g	0.1767	1.41	1.41	1.96	1.16	U	2.50	U	30
160-43230-11	SAMP	FSS-163-082621	Soil	Pu-241	pCi/g	-0.38	1.32	1.32	1.96	1.13	U	2.43	U	30
160-43230-12	SAMP	FSS-164-082621	Soil	Pu-241	pCi/g	0.796	1.72	1.72	1.96	1.40	U	3.00	U	30
160-43230-13	SAMP	FSS-165-082621	Soil	Pu-241	pCi/g	-0.461	1.32	1.32	1.96	1.13	U	2.43	U	30
160-43230-14	SAMP	FSS-166-082621	Soil	Pu-241	pCi/g	0.774	1.91	1.91	1.96	1.55	U	3.34	U	30
160-43230-15	SAMP	FSS-167-082621	Soil	Pu-241	pCi/g	1.01	1.70	1.70	1.96	1.36	U	2.92	U	30
160-43230-16	SAMP	FSS-168-082621	Soil	Pu-241	pCi/g	27.2	87.6	87.6	1.96	71.43	U	153	U	30
160-43230-17	SAMP	FSS-169-082621	Soil	Pu-241	pCi/g	-0.101	2.64	2.64	1.96	2.21	U	4.75	U	30
160-43230-18	SAMP	FSS-170-082621	Soil	Pu-241	pCi/g	0.0648	1.85	1.85	1.96	1.54	U	3.31	U	30
160-43230-2	SAMP	FSS-154-082621	Soil	Pu-241	pCi/g	-1.11	1.52	1.52	1.96	1.34	U	2.85	U	30
160-43230-3	SAMP	FSS-155-082621	Soil	Pu-241	pCi/g	-0.825	1.61	1.61	1.96	1.40	U	2.98	U	30
160-43230-4	SAMP	FSS-156-082621	Soil	Pu-241	pCi/g	-1.4	1.59	1.60	1.96	1.42	U	3.03	U	30
160-43230-5	SAMP	FSS-157-082621	Soil	Pu-241	pCi/g	-1.11	1.48	1.49	1.96	1.31	U	2.79	U	30
160-43230-6	SAMP	FSS-158-082621	Soil	Pu-241	pCi/g	-1.17	1.29	1.29	1.96	1.14	U	2.42	U	30
160-43230-7	SAMP	FSS-159-082621	Soil	Pu-241	pCi/g	0.00	1.41	1.41	1.96	1.19	U	2.53	U	30
160-43230-8	SAMP	FSS-160-082621	Soil	Pu-241	pCi/g	-0.310	1.47	1.47	1.96	1.28	U	2.72	U	30
160-43230-9	SAMP	FSS-161-082621	Soil	Pu-241	pCi/g	-0.907	1.36	1.36	1.96	1.18	U	2.52	U	30
LCS 160-526531/2-A	QC_LCS	LCS 160-526531/2-A	Soil	Pu-241	pCi/g	18.68	2.60	3.08	1.96	1.27		2.73		30
LCS 160-526535/2-A	QC_LCS	LCS 160-526535/2-A	Soil	Pu-241	pCi/g	17.52	2.39	2.85	1.96	1.23		2.61		30
MB 160-526531/1-A	QC_BLK	MB 160-526531/1-A	Soil	Pu-241	pCi/g	0.1078	1.39	1.39	1.96	1.15	U	2.47	U	30
MB 160-526535/1-A	QC_BLK	MB 160-526535/1-A	Soil	Pu-241	pCi/g	-1.191	1.50	1.50	1.96	1.32	U	2.82	U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43306-1	SAMP	FSS-171-082821	Soil	Sr-90	pCi/g	7.52	0.554	0.819	1.96	0.157		0.342		200
160-43306-10	SAMP	FSS-180-090221	Soil	Sr-90	pCi/g	0.429	0.224	0.226	1.96	0.156		0.340		200
160-43306-2	SAMP	FSS-172-082821	Soil	Sr-90	pCi/g	0.527	0.253	0.257	1.96	0.175		0.380		200
160-43306-3	SAMP	FSS-173-082821	Soil	Sr-90	pCi/g	2.91	0.372	0.439	1.96	0.149		0.327		200
160-43306-4	SAMP	FSS-174-082821	Soil	Sr-90	pCi/g	0.372	0.285	0.286	1.96	0.213		0.461	U	200
160-43306-5	SAMP	FSS-175-082821	Soil	Sr-90	pCi/g	0.0513	0.193	0.193	1.96	0.158	U	0.347	U	200
160-43306-6	SAMP	FSS-176-082821	Soil	Sr-90	pCi/g	0.147	0.273	0.273	1.96	0.216	U	0.475	U	200
160-43306-7	SAMP	FSS-177-082821	Soil	Sr-90	pCi/g	-0.0317	0.231	0.231	1.96	0.196	U	0.424	U	200
160-43306-8	SAMP	FSS-178-090221	Soil	Sr-90	pCi/g	0.283	0.253	0.254	1.96	0.193		0.416	U	200
160-43306-9	SAMP	FSS-179-090221	Soil	Sr-90	pCi/g	0.305	0.188	0.190	1.96	0.134		0.294		200
LCS 160-528280/2-A	QC_LCS	LCS 160-528280/2-A	Soil	Sr-90	pCi/g	6.878	0.568	0.792	1.96	0.165		0.363		200
MB 160-528280/1-A	QC_BLK	MB 160-528280/1-A	Soil	Sr-90	pCi/g	0.1897	0.260	0.260	1.96	0.204	U	0.442	U	200
160-43306-10	SAMP	FSS-180-090221	Soil	H-3	pCi/g	-0.0694	0.234	0.234	1.96	0.205	U	0.444	U	20
160-43306-10 DU	QC_DUP	160-43306-10 DU	Soil	H-3	pCi/g	-0.02971	0.231	0.231	1.96	0.197	U	0.426	U	20
160-43306-8	SAMP	FSS-178-090221	Soil	H-3	pCi/g	-0.0059	0.236	0.236	1.96	0.201	U	0.435	U	20
160-43306-8 MS	QC_MS	160-43306-8 MS	Soil	H-3	pCi/g	6.816	0.597	0.838	1.96	0.204		0.442		20
160-43306-9	SAMP	FSS-179-090221	Soil	H-3	pCi/g	-0.195	0.212	0.212	1.96	0.194	U	0.420	U	20
LCS 160-529492/2-A	QC_LCS	LCS 160-529492/2-A	Soil	H-3	pCi/g	6.859	0.561	0.815	1.96	0.182		0.394		20
MB 160-529492/1-A	QC_BLK	MB 160-529492/1-A	Soil	H-3	pCi/g	0.05405	0.238	0.238	1.96	0.196	U	0.426	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-238	pCi/g	-0.0647	0.0328	0.0332	1.96	0.0389	U	0.0907	U	960
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0691	0.0379	0.0383	1.96	0.0426	U	0.0983	U	960
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-238	pCi/g	-0.00759	0.0238	0.0238	1.96	0.0246	U	0.0796	U	240
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-239/Pu-240	pCi/g	0.0076	0.0205	0.0205	1.96	0.00932	U	0.0490	U	240
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-238	pCi/g	-0.00953	0.0132	0.0132	1.96	0.0157	U	0.0456	U	960
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-239/Pu-240	pCi/g	-0.00954	0.0132	0.0132	1.96	0.0157	U	0.0457	U	960
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-238	pCi/g	0.0178	0.0412	0.0413	1.96	0.0227	U	0.0880	U	240
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-239/Pu-240	pCi/g	0.00712	0.0296	0.0296	1.96	0.0185	U	0.0798	U	240
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-238	pCi/g	-0.0229	0.0344	0.0344	1.96	0.0372	U	0.101	U	400
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-239/Pu-240	pCi/g	0.0104	0.0266	0.0267	1.96	0.0159	U	0.0583	U	400
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-238	pCi/g	-0.0134	0.0463	0.0463	1.96	0.0430	U	0.114	U	400
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0118	0.0134	0.0134	1.96	0.0207	U	0.0697	U	400
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-238	pCi/g	0.0211	0.0401	0.0402	1.96	0.0183		0.0786	U	240
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0176	0.0154	0.0155	1.96	0.0289	U	0.100	U	240
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-238	pCi/g	-0.00305	0.0376	0.0376	1.96	0.0327	U	0.0929	U	400
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-239/Pu-240	pCi/g	0.0145	0.0265	0.0265	1.96	0.0116		0.0506	U	400
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-238	pCi/g	0.0136	0.0394	0.0394	1.96	0.0264	U	0.0853	U	240
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-239/Pu-240	pCi/g	-0.00271	0.00532	0.00532	1.96	0.0100	U	0.0525	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	Pu-238	pCi/g	0.00	0.0227	0.0227	1.96	0.0191	U	0.0692	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	Pu-239/Pu-240	pCi/g	0.0389	0.041	0.0411	1.96	0.00954		0.0502	U	240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-238	pCi/g	5.06	0.408	0.583	1.96	0.0176		0.0607		240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-239/Pu-240	pCi/g	5.486	0.424	0.620	1.96	0.00786		0.0256		240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-238	pCi/g	0.004267	0.0177	0.0177	1.96	0.0111	U	0.0478	U	240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-239/Pu-240	pCi/g	0.008542	0.0251	0.0251	1.96	0.0157	U	0.0570	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	U-235/U-236	pCi/g	0.0175	0.0343	0.0343	1.96	0.0161		0.0525	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	U-238	pCi/g	0.309	0.129	0.132	1.96	0.0129		0.0421		240
160-43306-10	SAMP	FSS-180-090221	Soil	U-233/U-234	pCi/g	0.252	0.100	0.102	1.96	0.0301		0.0874		240
160-43306-10	SAMP	FSS-180-090221	Soil	U-235/U-236	pCi/g	0.0254	0.0395	0.0396	1.96	0.0180		0.0699	U	240
160-43306-10	SAMP	FSS-180-090221	Soil	U-238	pCi/g	0.211	0.0896	0.0912	1.96	0.0220		0.0713		240
160-43306-2	SAMP	FSS-172-082821	Soil	U-235/U-236	pCi/g	0.0166	0.0325	0.0325	1.96	0.0153		0.0498	U	240
160-43306-2	SAMP	FSS-172-082821	Soil	U-238	pCi/g	0.333	0.130	0.133	1.96	0.0122		0.0399		240
160-43306-3	SAMP	FSS-173-082821	Soil	U-235/U-236	pCi/g	0.0326	0.0452	0.0453	1.96	0.0170		0.0730	U	240
160-43306-3	SAMP	FSS-173-082821	Soil	U-238	pCi/g	0.220	0.0994	0.101	1.96	0.0272		0.0858		240
160-43306-4	SAMP	FSS-174-082821	Soil	U-235/U-236	pCi/g	0.00935	0.0252	0.0252	1.96	0.0115	U	0.0603	U	240
160-43306-4	SAMP	FSS-174-082821	Soil	U-238	pCi/g	0.222	0.0944	0.0961	1.96	0.0159		0.0618		240
160-43306-5	SAMP	FSS-175-082821	Soil	U-235/U-236	pCi/g	-0.00381	0.00746	0.00746	1.96	0.0140	U	0.0737	U	240
160-43306-5	SAMP	FSS-175-082821	Soil	U-238	pCi/g	0.180	0.0929	0.094	1.96	0.0112		0.0591		240
160-43306-6	SAMP	FSS-176-082821	Soil	U-235/U-236	pCi/g	0.0132	0.0204	0.0204	1.96	0.0132	U	0.0364	U	960
160-43306-6	SAMP	FSS-176-082821	Soil	U-238	pCi/g	0.232	0.0490	0.0526	1.96	0.00613		0.0202		960
160-43306-7	SAMP	FSS-177-082821	Soil	U-235/U-236	pCi/g	0.0523	0.0592	0.0594	1.96	0.0160		0.0523		240
160-43306-7	SAMP	FSS-177-082821	Soil	U-238	pCi/g	0.234	0.113	0.115	1.96	0.0129		0.0677		240
160-43306-8	SAMP	FSS-178-090221	Soil	U-233/U-234	pCi/g	0.370	0.128	0.132	1.96	0.0364		0.103		240
160-43306-8	SAMP	FSS-178-090221	Soil	U-235/U-236	pCi/g	0.0286	0.0445	0.0445	1.96	0.0202		0.0786	U	240

160-43306-8	SAMP	FSS-178-090221	Soil	U-238	pCi/g	0.548	0.147	0.154	1.96	0.00937		0.0493		240
160-43306-9	SAMP	FSS-179-090221	Soil	U-233/U-234	pCi/g	0.474	0.135	0.141	1.96	0.0156		0.0608		240
160-43306-9	SAMP	FSS-179-090221	Soil	U-235/U-236	pCi/g	0.0336	0.0419	0.042	1.96	0.0112		0.0592	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	U-238	pCi/g	0.485	0.136	0.142	1.96	0.0127		0.0549		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-233/U-234	pCi/g	6.237	0.448	0.681	1.96	0.0109		0.0468		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-238	pCi/g	6.413	0.453	0.696	1.96	0.00767		0.0250		240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-233/U-234	pCi/g	-0.008128	0.00797	0.00799	1.96	0.0149	U	0.0543	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-235/U-236	pCi/g	0.02023	0.0357	0.0358	1.96	0.0186		0.0675	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-238	pCi/g	0.02028	0.0281	0.0282	1.96	0.0105		0.0454	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	C-14	pCi/g	1.16	0.956	0.964	1.96	0.742		1.57	U	20
160-43306-1 DU	QC_DUP	160-43306-1 DU	Soil	C-14	pCi/g	1.892	0.987	1.01	1.96	0.737		1.56		20
160-43306-1 MS	QC_MS	160-43306-1 MS	Soil	C-14	pCi/g	68.77	2.83	7.81	1.96	0.685		1.45		20
160-43306-10	SAMP	FSS-180-090221	Soil	C-14	pCi/g	0.382	0.668	0.669	1.96	0.540	U	1.14	U	20
160-43306-2	SAMP	FSS-172-082821	Soil	C-14	pCi/g	0.818	0.913	0.917	1.96	0.721		1.53	U	20
160-43306-3	SAMP	FSS-173-082821	Soil	C-14	pCi/g	1.19	0.918	0.927	1.96	0.709		1.50	U	20
160-43306-4	SAMP	FSS-174-082821	Soil	C-14	pCi/g	0.626	0.724	0.727	1.96	0.575		1.22	U	20
160-43306-5	SAMP	FSS-175-082821	Soil	C-14	pCi/g	0.753	0.796	0.800	1.96	0.627		1.33	U	20
160-43306-6	SAMP	FSS-176-082821	Soil	C-14	pCi/g	0.870	0.919	0.924	1.96	0.725		1.54	U	20
160-43306-7	SAMP	FSS-177-082821	Soil	C-14	pCi/g	0.711	0.861	0.864	1.96	0.684		1.45	U	20
160-43306-8	SAMP	FSS-178-090221	Soil	C-14	pCi/g	0.686	0.822	0.826	1.96	0.651		1.38	U	20
160-43306-9	SAMP	FSS-179-090221	Soil	C-14	pCi/g	0.896	0.941	0.946	1.96	0.741		1.57	U	20
LCS 160-530154/2-A	QC_LCS	LCS 160-530154/2-A	Soil	C-14	pCi/g	88.92	3.34	9.99	1.96	0.748		1.59		20
MB 160-530154/1-A	QC_BLK	MB 160-530154/1-A	Soil	C-14	pCi/g	0.6216	0.924	0.927	1.96	0.741	U	1.57	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	H-3	pCi/g	41.2	1.37	3.81	1.96	0.162		0.359		20
160-43306-2	SAMP	FSS-172-082821	Soil	H-3	pCi/g	37.6	1.30	3.49	1.96	0.160		0.355		20
160-43306-3	SAMP	FSS-173-082821	Soil	H-3	pCi/g	38.1	1.34	3.55	1.96	0.168		0.372		20
160-43306-4	SAMP	FSS-174-082821	Soil	H-3	pCi/g	0.513	0.248	0.252	1.96	0.165		0.365		20
160-43306-5	SAMP	FSS-175-082821	Soil	H-3	pCi/g	0.870	0.272	0.282	1.96	0.158		0.349		20
160-43306-6	SAMP	FSS-176-082821	Soil	H-3	pCi/g	3.92	0.463	0.573	1.96	0.164		0.362		20
160-43306-6 MS	QC_MS	160-43306-6 MS	Soil	H-3	pCi/g	10.11	0.697	1.12	1.96	0.161		0.356		20
160-43306-7	SAMP	FSS-177-082821	Soil	H-3	pCi/g	149	2.64	13.1	1.96	0.168		0.372		20
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	H-3	pCi/g	156.8	2.67	13.8	1.96	0.163		0.362		20
LCS 160-529475/2-A	QC_LCS	LCS 160-529475/2-A	Soil	H-3	pCi/g	7.682	0.628	0.913	1.96	0.168		0.372		20
MB 160-529475/1-A	QC_BLK	MB 160-529475/1-A	Soil	H-3	pCi/g	0.05946	0.206	0.206	1.96	0.17	U	0.372	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	Cs-137	pCi/g	4.05	0.232	0.474	1.96	0.00808		0.0256		30
160-43306-1	SAMP	FSS-171-082821	Soil	Co-60	pCi/g	0.0118	0.0206	0.0206	1.96	0.0399	U	0.0937	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Ra-226	pCi/g	0.532	0.163	0.171	1.96	0.0698		0.156		30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-155	pCi/g	-0.117	0.249	0.250	1.96	0.206	U	0.425	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Am-241	pCi/g	-0.111	0.246	0.246	1.96	0.203	U	0.418	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-152	pCi/g	0.014	0.0239	0.024	1.96	0.120	U	0.250	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-154	pCi/g	0.0801	0.122	0.122	1.96	0.0742		0.155	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Cs-137	pCi/g	-0.0354	0.0573	0.0574	1.96	0.0454	U	0.0982	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Co-60	pCi/g	-0.00655	0.0458	0.0458	1.96	0.0221	U	0.0549	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	K-40	pCi/g	3.61	0.813	0.89	1.96	0.264		0.637		30
160-43306-10	SAMP	FSS-180-090221	Soil	Na-22	pCi/g	0.0103	0.0276	0.0276	1.96	0.0207	U	0.0519	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Zn-65	pCi/g	-0.037	0.137	0.137	1.96	0.112	U	0.243	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Ra-226	pCi/g	0.293	0.0923	0.097	1.96	0.0399		0.0928		30
160-43306-10	SAMP	FSS-180-090221	Soil	Ac-228	pCi/g	0.349	0.135	0.140	1.96	0.124		0.276		30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-155	pCi/g	0.00744	0.0827	0.0827	1.96	0.133	U	0.276	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Am-241	pCi/g	-0.0195	0.137	0.137	1.96	0.114	U	0.238	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-152	pCi/g	0.0554	0.147	0.147	1.96	0.0734	U	0.154	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Bi-214	pCi/g	0.293	0.0923	0.097	1.96	0.0399		0.0928		30
160-43306-10	SAMP	FSS-180-090221	Soil	Bi-212	pCi/g	0.238	0.460	0.461	1.96	0.358	U	0.806	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Pb-214	pCi/g	0.305	0.0884	0.0937	1.96	0.0490		0.109		30
160-43306-10	SAMP	FSS-180-090221	Soil	Pb-212	pCi/g	0.333	0.0754	0.0864	1.96	0.0404		0.0879		30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-154	pCi/g	0.0727	0.0773	0.0777	1.96	0.0474		0.100	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Th-232	pCi/g	0.349	0.135	0.140	1.96	0.124		0.276		30
160-43306-2	SAMP	FSS-172-082821	Soil	Cs-137	pCi/g	0.025	0.0581	0.0581	1.96	0.0453	U	0.104	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Co-60	pCi/g	0.0344	0.0301	0.0303	1.96	0.0160		0.0506	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Ra-226	pCi/g	0.212	0.107	0.109	1.96	0.181		0.385	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Eu-155	pCi/g	-0.137	0.477	0.477	1.96	0.398	U	0.814	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Am-241	pCi/g	0.045	0.188	0.188	1.96	0.156	U	0.326	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Eu-152	pCi/g	0.117	0.231	0.231	1.96	0.0996		0.213	U	30

160-43306-2	SAMP	FSS-172-082821	Soil	Eu-154	pCi/g	0.0533	0.0885	0.0887	1.96	0.0742	U	0.158	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Cs-137	pCi/g	0.697	0.108	0.129	1.96	0.0168		0.0447		30
160-43306-3	SAMP	FSS-173-082821	Soil	Co-60	pCi/g	0.015	0.0391	0.0392	1.96	0.0326	U	0.0811	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Ra-226	pCi/g	0.277	0.135	0.138	1.96	0.0675		0.154		30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-155	pCi/g	-0.000671	0.166	0.166	1.96	0.225	U	0.465	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Am-241	pCi/g	-0.0877	0.221	0.221	1.96	0.183	U	0.378	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-152	pCi/g	0.0722	0.0963	0.0966	1.96	0.104	U	0.219	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-154	pCi/g	0.0251	0.129	0.130	1.96	0.0715	U	0.151	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Cs-137	pCi/g	0.00207	0.0604	0.0604	1.96	0.0505	U	0.110	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Co-60	pCi/g	0.00701	0.0414	0.0414	1.96	0.0384	U	0.090	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Ra-226	pCi/g	0.410	0.117	0.124	1.96	0.0524		0.120		30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-155	pCi/g	-0.00229	0.00543	0.00544	1.96	0.254	U	0.521	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Am-241	pCi/g	0.0195	0.181	0.181	1.96	0.151	U	0.313	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-152	pCi/g	0.133	0.270	0.271	1.96	0.175	U	0.369	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-154	pCi/g	0.0289	0.0582	0.0583	1.96	0.0524	U	0.111	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Cs-137	pCi/g	-0.00328	0.0829	0.0829	1.96	0.0694	U	0.152	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Co-60	pCi/g	0.0238	0.0731	0.0731	1.96	0.0389	U	0.0967	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Ra-226	pCi/g	0.562	0.175	0.184	1.96	0.0741		0.171		30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-155	pCi/g	0.0845	0.208	0.208	1.96	0.377	U	0.772	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Am-241	pCi/g	0.0454	0.193	0.193	1.96	0.160	U	0.335	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-152	pCi/g	0.0565	0.0849	0.0851	1.96	0.104	U	0.222	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-154	pCi/g	0.0477	0.111	0.112	1.96	0.0912	U	0.192	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Cs-137	pCi/g	-0.0529	0.0797	0.0799	1.96	0.0634	U	0.136	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Co-60	pCi/g	0.0569	0.0322	0.0327	1.96	0.0111		0.035		30
160-43306-6	SAMP	FSS-176-082821	Soil	Ra-226	pCi/g	0.443	0.126	0.134	1.96	0.0370		0.0892		30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-155	pCi/g	0.00	0.0618	0.0618	1.96	0.161	U	0.334	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Am-241	pCi/g	0.0102	0.166	0.166	1.96	0.139	U	0.289	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-152	pCi/g	0.0924	0.125	0.125	1.96	0.0937	U	0.196	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-154	pCi/g	0.0928	0.146	0.147	1.96	0.0568		0.120	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Cs-137	pCi/g	-0.049	0.0814	0.0816	1.96	0.0639	U	0.140	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Co-60	pCi/g	0.0141	0.0143	0.0144	1.96	0.0152	U	0.0481	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Ra-226	pCi/g	0.102	0.0899	0.0905	1.96	0.179	U	0.380	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-155	pCi/g	0.0397	0.108	0.109	1.96	0.185	U	0.387	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Am-241	pCi/g	0.0685	0.156	0.156	1.96	0.127	U	0.269	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-152	pCi/g	0.141	0.193	0.194	1.96	0.0943		0.201	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-154	pCi/g	0.0593	0.104	0.104	1.96	0.0684	U	0.145	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Cs-137	pCi/g	0.00	0.0397	0.0397	1.96	0.0472	U	0.106	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Co-60	pCi/g	0.00359	0.0211	0.0211	1.96	0.0146	U	0.0462	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Ra-226	pCi/g	-0.04245	0.187	0.187	1.96	0.219	U	0.458	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-155	pCi/g	0.00	0.0844	0.0844	1.96	0.185	U	0.386	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Am-241	pCi/g	0.05809	0.135	0.135	1.96	0.0874	U	0.188	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-152	pCi/g	0.09254	0.183	0.183	1.96	0.0798		0.171	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-154	pCi/g	0.07244	0.138	0.138	1.96	0.0553		0.119	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Cs-137	pCi/g	0.291	0.0819	0.0869	1.96	0.0258		0.0615		30
160-43306-8	SAMP	FSS-178-090221	Soil	Co-60	pCi/g	0.0123	0.0596	0.0596	1.96	0.0291	U	0.0725	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	K-40	pCi/g	5.93	1.10	1.24	1.96	0.123		0.390		30
160-43306-8	SAMP	FSS-178-090221	Soil	Na-22	pCi/g	0.0271	0.0406	0.0407	1.96	0.0282	U	0.0701	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Zn-65	pCi/g	-0.044	0.184	0.184	1.96	0.151	U	0.326	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Ra-226	pCi/g	0.59	0.168	0.178	1.96	0.0732		0.164		30
160-43306-8	SAMP	FSS-178-090221	Soil	Ac-228	pCi/g	0.698	0.223	0.234	1.96	0.0623		0.161		30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-155	pCi/g	-0.124	0.411	0.411	1.96	0.343	U	0.699	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Am-241	pCi/g	-0.0941	0.223	0.223	1.96	0.185	U	0.380	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-152	pCi/g	0.0858	0.159	0.160	1.96	0.108	U	0.226	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Bi-214	pCi/g	0.59	0.168	0.178	1.96	0.0732		0.164		30
160-43306-8	SAMP	FSS-178-090221	Soil	Bi-212	pCi/g	-0.312	0.920	0.920	1.96	0.748	U	1.62	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Pb-214	pCi/g	0.64	0.163	0.175	1.96	0.0714		0.157		30
160-43306-8	SAMP	FSS-178-090221	Soil	Pb-212	pCi/g	0.681	0.118	0.137	1.96	0.0593		0.128		30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-154	pCi/g	0.108	0.137	0.137	1.96	0.0741		0.155	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Th-232	pCi/g	0.698	0.223	0.234	1.96	0.0623		0.161		30
160-43306-9	SAMP	FSS-179-090221	Soil	Cs-137	pCi/g	0.141	0.053	0.0549	1.96	0.0185		0.044		30
160-43306-9	SAMP	FSS-179-090221	Soil	Co-60	pCi/g	0.00684	0.0297	0.0297	1.96	0.0208	U	0.0518	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	K-40	pCi/g	7.34	1.03	1.27	1.96	0.0882		0.279		30
160-43306-9	SAMP	FSS-179-090221	Soil	Na-22	pCi/g	0.029	0.0201	0.0203	1.96	0.0084		0.0267		30

160-43306-9	SAMP	FSS-179-090221	Soil	Zn-65	pCi/g	0.00	0.0309	0.0309	1.96	0.106	U	0.229	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Ra-226	pCi/g	0.582	0.122	0.136	1.96	0.0427		0.0974		30
160-43306-9	SAMP	FSS-179-090221	Soil	Ac-228	pCi/g	0.950	0.158	0.184	1.96	0.0223		0.0707		30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-155	pCi/g	-0.0966	0.407	0.407	1.96	0.341	U	0.691	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Am-241	pCi/g	-0.0252	0.155	0.155	1.96	0.0981	U	0.204	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-152	pCi/g	0.151	0.164	0.164	1.96	0.0768		0.161	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Bi-214	pCi/g	0.582	0.122	0.136	1.96	0.0427		0.0974		30
160-43306-9	SAMP	FSS-179-090221	Soil	Bi-212	pCi/g	0.391	0.696	0.697	1.96	0.5560	U	1.20	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Pb-214	pCi/g	0.562	0.108	0.122	1.96	0.0361		0.0821		30
160-43306-9	SAMP	FSS-179-090221	Soil	Pb-212	pCi/g	0.723	0.0932	0.131	1.96	0.0373		0.0811		30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-154	pCi/g	0.0536	0.130	0.130	1.96	0.0500		0.105	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Th-232	pCi/g	0.950	0.158	0.184	1.96	0.0223		0.0707		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Cs-137	pCi/g	26.25	0.557	2.73	1.96	0.0707		0.149		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Co-60	pCi/g	8.483	0.263	0.875	1.96	0.0276		0.0665		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Am-241	pCi/g	98.63	1.42	10.1	1.96	0.495		0.999		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Cs-137	pCi/g	26.51	0.625	2.77	1.96	0.0798		0.169		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Co-60	pCi/g	8.408	0.296	0.879	1.96	0.0435		0.101		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Am-241	pCi/g	100.5	1.42	10.3	1.96	0.540		1.09		30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Cs-137	pCi/g	-0.006036	0.0599	0.0599	1.96	0.0344	U	0.0798	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Co-60	pCi/g	0.03189	0.0295	0.0297	1.96	0.0136		0.043	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Ra-226	pCi/g	-0.006501	0.155	0.155	1.96	0.129	U	0.278	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-155	pCi/g	0.0009131	0.137	0.137	1.96	0.115	U	0.245	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Am-241	pCi/g	0.00	0.0573	0.0573	1.96	0.0744	U	0.161	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-152	pCi/g	0.04119	0.0513	0.0514	1.96	0.0744	U	0.160	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-154	pCi/g	-0.03973	0.0811	0.0812	1.96	0.0659	U	0.139	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Cs-137	pCi/g	0.00	0.0131	0.0131	1.96	0.0156	U	0.044	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Co-60	pCi/g	-0.01799	0.0769	0.0769	1.96	0.0374	U	0.0931	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	K-40	pCi/g	0.06795	0.799	0.799	1.96	0.388	U	0.960	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Na-22	pCi/g	-0.01739	0.0478	0.0478	1.96	0.0362	U	0.0900	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Zn-65	pCi/g	0.00	0.0228	0.0228	1.96	0.102	U	0.235	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Ra-226	pCi/g	0.01152	0.0575	0.0576	1.96	0.168	U	0.358	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Ac-228	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-155	pCi/g	-0.1013	0.355	0.356	1.96	0.296	U	0.609	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Am-241	pCi/g	-0.05699	0.160	0.160	1.96	0.131	U	0.277	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-152	pCi/g	0.1107	0.0767	0.0775	1.96	0.0757		0.165	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Bi-214	pCi/g	0.01152	0.0575	0.0576	1.96	0.168	U	0.358	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Bi-212	pCi/g	0.3075	0.642	0.643	1.96	0.494	U	1.14	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Pb-214	pCi/g	0.002072	0.00233	0.00234	1.96	0.114	U	0.245	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Pb-212	pCi/g	-0.0001431	0.108	0.108	1.96	0.0898	U	0.191	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-154	pCi/g	0.01246	0.066	0.0661	1.96	0.0545	U	0.118	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Th-232	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Ni-63	pCi/g	1.01	0.947	0.953	1.96	0.777		1.62	U	60
160-43306-10	SAMP	FSS-180-090221	Soil	Ni-63	pCi/g	0.853	0.945	0.949	1.96	0.793		1.66	U	60
160-43306-2	SAMP	FSS-172-082821	Soil	Ni-63	pCi/g	0.667	0.909	0.912	1.96	0.754	U	1.58	U	60
160-43306-3	SAMP	FSS-173-082821	Soil	Ni-63	pCi/g	0.485	0.859	0.861	1.96	0.719	U	1.50	U	60
160-43306-4	SAMP	FSS-174-082821	Soil	Ni-63	pCi/g	1.12	1.07	1.08	1.96	0.886		1.85	U	60
160-43306-5	SAMP	FSS-175-082821	Soil	Ni-63	pCi/g	0.51	0.919	0.921	1.96	0.773	U	1.62	U	60
160-43306-6	SAMP	FSS-176-082821	Soil	Ni-63	pCi/g	0.54	0.826	0.828	1.96	0.681	U	1.42	U	60
160-43306-7	SAMP	FSS-177-082821	Soil	Ni-63	pCi/g	0.387	0.904	0.905	1.96	0.770	U	1.61	U	60
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Ni-63	pCi/g	-0.268	0.873	0.874	1.96	0.760	U	1.59	U	60
160-43306-8	SAMP	FSS-178-090221	Soil	Ni-63	pCi/g	0.762	0.944	0.947	1.96	0.781	U	1.63	U	60
160-43306-9	SAMP	FSS-179-090221	Soil	Ni-63	pCi/g	0.170	0.859	0.859	1.96	0.734	U	1.53	U	60
LCS 160-529541/2-A	QC_LCS	LCS 160-529541/2-A	Soil	Ni-63	pCi/g	20.84	1.67	2.70	1.96	0.819		1.71		60
MB 160-529541/1-A	QC_BLK	MB 160-529541/1-A	Soil	Ni-63	pCi/g	4.762	1.15	1.25	1.96	0.819		1.71		60
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-241	pCi/g	0.384	3.17	3.17	1.96	2.65	U	5.70	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-241	pCi/g	-0.716	1.78	1.78	1.96	1.53	U	3.28	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-241	pCi/g	-0.813	3.38	3.38	1.96	2.89	U	6.19	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-241	pCi/g	0.273	2.55	2.55	1.96	2.12	U	4.54	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-241	pCi/g	-0.911	2.57	2.57	1.96	2.19	U	4.70	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-241	pCi/g	-2.65	2.47	2.48	1.96	2.24	U	4.82	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-241	pCi/g	-0.751	2.62	2.62	1.96	2.25	U	4.82	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-241	pCi/g	-0.151	2.40	2.40	1.96	2.02	U	4.34	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-241	pCi/g	-1.01	1.92	1.92	1.96	1.66	U	3.57	U	30

160-43306-9	SAMP	FSS-179-090221	Soil	Pu-241	pCi/g	-1.06	1.79	1.80	1.96	1.57	U	3.37	U	30
LCS 160-526531/2-A	QC_LCS	LCS 160-526531/2-A	Soil	Pu-241	pCi/g	18.68	2.60	3.08	1.96	1.27		2.73		30
MB 160-526531/1-A	QC_BLK	MB 160-526531/1-A	Soil	Pu-241	pCi/g	0.1078	1.39	1.39	1.96	1.15	U	2.47	U	30

Lab Sample ID	QC Type	Field Sample ID	Matrix	Analyte Name	Reporting Units	Activity	Counting Uncertainty	Total Uncertainty	Sigma Value	Critical Value	U Flag at Lc	MDC	U Flag at MDC	Count Time
160-43306-1	SAMP	FSS-171-082821	Soil	Sr-90	pCi/g	7.52	0.554	0.819	1.96	0.157		0.342		200
160-43306-10	SAMP	FSS-180-090221	Soil	Sr-90	pCi/g	0.429	0.224	0.226	1.96	0.156		0.340		200
160-43306-2	SAMP	FSS-172-082821	Soil	Sr-90	pCi/g	0.527	0.253	0.257	1.96	0.175		0.380		200
160-43306-3	SAMP	FSS-173-082821	Soil	Sr-90	pCi/g	2.91	0.372	0.439	1.96	0.149		0.327		200
160-43306-4	SAMP	FSS-174-082821	Soil	Sr-90	pCi/g	0.372	0.285	0.286	1.96	0.213		0.461	U	200
160-43306-5	SAMP	FSS-175-082821	Soil	Sr-90	pCi/g	0.0513	0.193	0.193	1.96	0.158	U	0.347	U	200
160-43306-6	SAMP	FSS-176-082821	Soil	Sr-90	pCi/g	0.147	0.273	0.273	1.96	0.216	U	0.475	U	200
160-43306-7	SAMP	FSS-177-082821	Soil	Sr-90	pCi/g	-0.0317	0.231	0.231	1.96	0.196	U	0.424	U	200
160-43306-8	SAMP	FSS-178-090221	Soil	Sr-90	pCi/g	0.283	0.253	0.254	1.96	0.193		0.416	U	200
160-43306-9	SAMP	FSS-179-090221	Soil	Sr-90	pCi/g	0.305	0.188	0.190	1.96	0.134		0.294		200
LCS 160-528280/2-A	QC_LCS	LCS 160-528280/2-A	Soil	Sr-90	pCi/g	6.878	0.568	0.792	1.96	0.165		0.363		200
MB 160-528280/1-A	QC_BLK	MB 160-528280/1-A	Soil	Sr-90	pCi/g	0.1897	0.260	0.260	1.96	0.204	U	0.442	U	200
160-43306-10	SAMP	FSS-180-090221	Soil	H-3	pCi/g	-0.0694	0.234	0.234	1.96	0.205	U	0.444	U	20
160-43306-10 DU	QC_DUP	160-43306-10 DU	Soil	H-3	pCi/g	-0.02971	0.231	0.231	1.96	0.197	U	0.426	U	20
160-43306-8	SAMP	FSS-178-090221	Soil	H-3	pCi/g	-0.0059	0.236	0.236	1.96	0.201	U	0.435	U	20
160-43306-8 MS	QC_MS	160-43306-8 MS	Soil	H-3	pCi/g	6.816	0.597	0.838	1.96	0.204		0.442		20
160-43306-9	SAMP	FSS-179-090221	Soil	H-3	pCi/g	-0.195	0.212	0.212	1.96	0.194	U	0.420	U	20
LCS 160-529492/2-A	QC_LCS	LCS 160-529492/2-A	Soil	H-3	pCi/g	6.859	0.561	0.815	1.96	0.182		0.394		20
MB 160-529492/1-A	QC_BLK	MB 160-529492/1-A	Soil	H-3	pCi/g	0.05405	0.238	0.238	1.96	0.196	U	0.426	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-238	pCi/g	-0.0647	0.0328	0.0332	1.96	0.0389	U	0.0907	U	960
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0691	0.0379	0.0383	1.96	0.0426	U	0.0983	U	960
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-238	pCi/g	-0.00759	0.0238	0.0238	1.96	0.0246	U	0.0796	U	240
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-239/Pu-240	pCi/g	0.0076	0.0205	0.0205	1.96	0.00932	U	0.0490	U	240
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-238	pCi/g	-0.00953	0.0132	0.0132	1.96	0.0157	U	0.0456	U	960
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-239/Pu-240	pCi/g	-0.00954	0.0132	0.0132	1.96	0.0157	U	0.0457	U	960
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-238	pCi/g	0.0178	0.0412	0.0413	1.96	0.0227	U	0.0880	U	240
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-239/Pu-240	pCi/g	0.00712	0.0296	0.0296	1.96	0.0185	U	0.0798	U	240
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-238	pCi/g	-0.0229	0.0344	0.0344	1.96	0.0372	U	0.101	U	400
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-239/Pu-240	pCi/g	0.0104	0.0266	0.0267	1.96	0.0159	U	0.0583	U	400
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-238	pCi/g	-0.0134	0.0463	0.0463	1.96	0.0430	U	0.114	U	400
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0118	0.0134	0.0134	1.96	0.0207	U	0.0697	U	400
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-238	pCi/g	0.0211	0.0401	0.0402	1.96	0.0183		0.0786	U	240
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-239/Pu-240	pCi/g	-0.0176	0.0154	0.0155	1.96	0.0289	U	0.100	U	240
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-238	pCi/g	-0.00305	0.0376	0.0376	1.96	0.0327	U	0.0929	U	400
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-239/Pu-240	pCi/g	0.0145	0.0265	0.0265	1.96	0.0116		0.0506	U	400
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-238	pCi/g	0.0136	0.0394	0.0394	1.96	0.0264	U	0.0853	U	240
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-239/Pu-240	pCi/g	-0.00271	0.00532	0.00532	1.96	0.0100	U	0.0525	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	Pu-238	pCi/g	0.00	0.0227	0.0227	1.96	0.0191	U	0.0692	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	Pu-239/Pu-240	pCi/g	0.0389	0.041	0.0411	1.96	0.00954		0.0502	U	240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-238	pCi/g	5.06	0.408	0.583	1.96	0.0176		0.0607		240
LCS 160-526443/2-A	QC_LCS	LCS 160-526443/2-A	Soil	Pu-239/Pu-240	pCi/g	5.486	0.424	0.620	1.96	0.00786		0.0256		240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-238	pCi/g	0.004267	0.0177	0.0177	1.96	0.0111	U	0.0478	U	240
MB 160-526443/1-A	QC_BLK	MB 160-526443/1-A	Soil	Pu-239/Pu-240	pCi/g	0.008542	0.0251	0.0251	1.96	0.0157	U	0.0570	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	U-235/U-236	pCi/g	0.0175	0.0343	0.0343	1.96	0.0161		0.0525	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	U-238	pCi/g	0.309	0.129	0.132	1.96	0.0129		0.0421		240
160-43306-10	SAMP	FSS-180-090221	Soil	U-233/U-234	pCi/g	0.252	0.100	0.102	1.96	0.0301		0.0874		240
160-43306-10	SAMP	FSS-180-090221	Soil	U-235/U-236	pCi/g	0.0254	0.0395	0.0396	1.96	0.0180		0.0699	U	240
160-43306-10	SAMP	FSS-180-090221	Soil	U-238	pCi/g	0.211	0.0896	0.0912	1.96	0.0220		0.0713		240
160-43306-2	SAMP	FSS-172-082821	Soil	U-235/U-236	pCi/g	0.0166	0.0325	0.0325	1.96	0.0153		0.0498	U	240
160-43306-2	SAMP	FSS-172-082821	Soil	U-238	pCi/g	0.333	0.130	0.133	1.96	0.0122		0.0399		240
160-43306-3	SAMP	FSS-173-082821	Soil	U-235/U-236	pCi/g	0.0326	0.0452	0.0453	1.96	0.0170		0.0730	U	240
160-43306-3	SAMP	FSS-173-082821	Soil	U-238	pCi/g	0.220	0.0994	0.101	1.96	0.0272		0.0858		240
160-43306-4	SAMP	FSS-174-082821	Soil	U-235/U-236	pCi/g	0.00935	0.0252	0.0252	1.96	0.0115	U	0.0603	U	240
160-43306-4	SAMP	FSS-174-082821	Soil	U-238	pCi/g	0.222	0.0944	0.0961	1.96	0.0159		0.0618		240
160-43306-5	SAMP	FSS-175-082821	Soil	U-235/U-236	pCi/g	-0.00381	0.00746	0.00746	1.96	0.0140	U	0.0737	U	240
160-43306-5	SAMP	FSS-175-082821	Soil	U-238	pCi/g	0.180	0.0929	0.094	1.96	0.0112		0.0591		240
160-43306-6	SAMP	FSS-176-082821	Soil	U-235/U-236	pCi/g	0.0132	0.0204	0.0204	1.96	0.0132	U	0.0364	U	960
160-43306-6	SAMP	FSS-176-082821	Soil	U-238	pCi/g	0.232	0.0490	0.0526	1.96	0.00613		0.0202		960
160-43306-7	SAMP	FSS-177-082821	Soil	U-235/U-236	pCi/g	0.0523	0.0592	0.0594	1.96	0.0160		0.0523		240
160-43306-7	SAMP	FSS-177-082821	Soil	U-238	pCi/g	0.234	0.113	0.115	1.96	0.0129		0.0677		240
160-43306-8	SAMP	FSS-178-090221	Soil	U-233/U-234	pCi/g	0.370	0.128	0.132	1.96	0.0364		0.103		240
160-43306-8	SAMP	FSS-178-090221	Soil	U-235/U-236	pCi/g	0.0286	0.0445	0.0445	1.96	0.0202		0.0786	U	240

160-43306-8	SAMP	FSS-178-090221	Soil	U-238	pCi/g	0.548	0.147	0.154	1.96	0.00937		0.0493		240
160-43306-9	SAMP	FSS-179-090221	Soil	U-233/U-234	pCi/g	0.474	0.135	0.141	1.96	0.0156		0.0608		240
160-43306-9	SAMP	FSS-179-090221	Soil	U-235/U-236	pCi/g	0.0336	0.0419	0.042	1.96	0.0112		0.0592	U	240
160-43306-9	SAMP	FSS-179-090221	Soil	U-238	pCi/g	0.485	0.136	0.142	1.96	0.0127		0.0549		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-233/U-234	pCi/g	6.237	0.448	0.681	1.96	0.0109		0.0468		240
LCS 160-526530/2-A	QC_LCS	LCS 160-526530/2-A	Soil	U-238	pCi/g	6.413	0.453	0.696	1.96	0.00767		0.0250		240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-233/U-234	pCi/g	-0.008128	0.00797	0.00799	1.96	0.0149	U	0.0543	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-235/U-236	pCi/g	0.02023	0.0357	0.0358	1.96	0.0186		0.0675	U	240
MB 160-526530/1-A	QC_BLK	MB 160-526530/1-A	Soil	U-238	pCi/g	0.02028	0.0281	0.0282	1.96	0.0105		0.0454	U	240
160-43306-1	SAMP	FSS-171-082821	Soil	C-14	pCi/g	1.16	0.956	0.964	1.96	0.742		1.57	U	20
160-43306-1 DU	QC_DUP	160-43306-1 DU	Soil	C-14	pCi/g	1.892	0.987	1.01	1.96	0.737		1.56		20
160-43306-1 MS	QC_MS	160-43306-1 MS	Soil	C-14	pCi/g	68.77	2.83	7.81	1.96	0.685		1.45		20
160-43306-10	SAMP	FSS-180-090221	Soil	C-14	pCi/g	0.382	0.668	0.669	1.96	0.540	U	1.14	U	20
160-43306-2	SAMP	FSS-172-082821	Soil	C-14	pCi/g	0.818	0.913	0.917	1.96	0.721		1.53	U	20
160-43306-3	SAMP	FSS-173-082821	Soil	C-14	pCi/g	1.19	0.918	0.927	1.96	0.709		1.50	U	20
160-43306-4	SAMP	FSS-174-082821	Soil	C-14	pCi/g	0.626	0.724	0.727	1.96	0.575		1.22	U	20
160-43306-5	SAMP	FSS-175-082821	Soil	C-14	pCi/g	0.753	0.796	0.800	1.96	0.627		1.33	U	20
160-43306-6	SAMP	FSS-176-082821	Soil	C-14	pCi/g	0.870	0.919	0.924	1.96	0.725		1.54	U	20
160-43306-7	SAMP	FSS-177-082821	Soil	C-14	pCi/g	0.711	0.861	0.864	1.96	0.684		1.45	U	20
160-43306-8	SAMP	FSS-178-090221	Soil	C-14	pCi/g	0.686	0.822	0.826	1.96	0.651		1.38	U	20
160-43306-9	SAMP	FSS-179-090221	Soil	C-14	pCi/g	0.896	0.941	0.946	1.96	0.741		1.57	U	20
LCS 160-530154/2-A	QC_LCS	LCS 160-530154/2-A	Soil	C-14	pCi/g	88.92	3.34	9.99	1.96	0.748		1.59		20
MB 160-530154/1-A	QC_BLK	MB 160-530154/1-A	Soil	C-14	pCi/g	0.6216	0.924	0.927	1.96	0.741	U	1.57	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	H-3	pCi/g	41.2	1.37	3.81	1.96	0.162		0.359		20
160-43306-2	SAMP	FSS-172-082821	Soil	H-3	pCi/g	37.6	1.30	3.49	1.96	0.160		0.355		20
160-43306-3	SAMP	FSS-173-082821	Soil	H-3	pCi/g	38.1	1.34	3.55	1.96	0.168		0.372		20
160-43306-4	SAMP	FSS-174-082821	Soil	H-3	pCi/g	0.513	0.248	0.252	1.96	0.165		0.365		20
160-43306-5	SAMP	FSS-175-082821	Soil	H-3	pCi/g	0.870	0.272	0.282	1.96	0.158		0.349		20
160-43306-6	SAMP	FSS-176-082821	Soil	H-3	pCi/g	3.92	0.463	0.573	1.96	0.164		0.362		20
160-43306-6 MS	QC_MS	160-43306-6 MS	Soil	H-3	pCi/g	10.11	0.697	1.12	1.96	0.161		0.356		20
160-43306-7	SAMP	FSS-177-082821	Soil	H-3	pCi/g	149	2.64	13.1	1.96	0.168		0.372		20
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	H-3	pCi/g	156.8	2.67	13.8	1.96	0.163		0.362		20
LCS 160-529475/2-A	QC_LCS	LCS 160-529475/2-A	Soil	H-3	pCi/g	7.682	0.628	0.913	1.96	0.168		0.372		20
MB 160-529475/1-A	QC_BLK	MB 160-529475/1-A	Soil	H-3	pCi/g	0.05946	0.206	0.206	1.96	0.17	U	0.372	U	20
160-43306-1	SAMP	FSS-171-082821	Soil	Cs-137	pCi/g	4.05	0.232	0.474	1.96	0.00808		0.0256		30
160-43306-1	SAMP	FSS-171-082821	Soil	Co-60	pCi/g	0.0118	0.0206	0.0206	1.96	0.0399	U	0.0937	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Ra-226	pCi/g	0.532	0.163	0.171	1.96	0.0698		0.156		30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-155	pCi/g	-0.117	0.249	0.250	1.96	0.206	U	0.425	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Am-241	pCi/g	-0.111	0.246	0.246	1.96	0.203	U	0.418	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-152	pCi/g	0.014	0.0239	0.024	1.96	0.120	U	0.250	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Eu-154	pCi/g	0.0801	0.122	0.122	1.96	0.0742		0.155	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Cs-137	pCi/g	-0.0354	0.0573	0.0574	1.96	0.0454	U	0.0982	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Co-60	pCi/g	-0.00655	0.0458	0.0458	1.96	0.0221	U	0.0549	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	K-40	pCi/g	3.61	0.813	0.89	1.96	0.264		0.637		30
160-43306-10	SAMP	FSS-180-090221	Soil	Na-22	pCi/g	0.0103	0.0276	0.0276	1.96	0.0207	U	0.0519	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Zn-65	pCi/g	-0.037	0.137	0.137	1.96	0.112	U	0.243	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Ra-226	pCi/g	0.293	0.0923	0.097	1.96	0.0399		0.0928		30
160-43306-10	SAMP	FSS-180-090221	Soil	Ac-228	pCi/g	0.349	0.135	0.140	1.96	0.124		0.276		30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-155	pCi/g	0.00744	0.0827	0.0827	1.96	0.133	U	0.276	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Am-241	pCi/g	-0.0195	0.137	0.137	1.96	0.114	U	0.238	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-152	pCi/g	0.0554	0.147	0.147	1.96	0.0734	U	0.154	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Bi-214	pCi/g	0.293	0.0923	0.097	1.96	0.0399		0.0928		30
160-43306-10	SAMP	FSS-180-090221	Soil	Bi-212	pCi/g	0.238	0.460	0.461	1.96	0.358	U	0.806	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Pb-214	pCi/g	0.305	0.0884	0.0937	1.96	0.0490		0.109		30
160-43306-10	SAMP	FSS-180-090221	Soil	Pb-212	pCi/g	0.333	0.0754	0.0864	1.96	0.0404		0.0879		30
160-43306-10	SAMP	FSS-180-090221	Soil	Eu-154	pCi/g	0.0727	0.0773	0.0777	1.96	0.0474		0.100	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Th-232	pCi/g	0.349	0.135	0.140	1.96	0.124		0.276		30
160-43306-2	SAMP	FSS-172-082821	Soil	Cs-137	pCi/g	0.025	0.0581	0.0581	1.96	0.0453	U	0.104	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Co-60	pCi/g	0.0344	0.0301	0.0303	1.96	0.0160		0.0506	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Ra-226	pCi/g	0.212	0.107	0.109	1.96	0.181		0.385	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Eu-155	pCi/g	-0.137	0.477	0.477	1.96	0.398	U	0.814	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Am-241	pCi/g	0.045	0.188	0.188	1.96	0.156	U	0.326	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Eu-152	pCi/g	0.117	0.231	0.231	1.96	0.0996		0.213	U	30

160-43306-2	SAMP	FSS-172-082821	Soil	Eu-154	pCi/g	0.0533	0.0885	0.0887	1.96	0.0742	U	0.158	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Cs-137	pCi/g	0.697	0.108	0.129	1.96	0.0168		0.0447		30
160-43306-3	SAMP	FSS-173-082821	Soil	Co-60	pCi/g	0.015	0.0391	0.0392	1.96	0.0326	U	0.0811	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Ra-226	pCi/g	0.277	0.135	0.138	1.96	0.0675		0.154		30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-155	pCi/g	-0.000671	0.166	0.166	1.96	0.225	U	0.465	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Am-241	pCi/g	-0.0877	0.221	0.221	1.96	0.183	U	0.378	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-152	pCi/g	0.0722	0.0963	0.0966	1.96	0.104	U	0.219	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Eu-154	pCi/g	0.0251	0.129	0.130	1.96	0.0715	U	0.151	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Cs-137	pCi/g	0.00207	0.0604	0.0604	1.96	0.0505	U	0.110	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Co-60	pCi/g	0.00701	0.0414	0.0414	1.96	0.0384	U	0.090	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Ra-226	pCi/g	0.410	0.117	0.124	1.96	0.0524		0.120		30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-155	pCi/g	-0.00229	0.00543	0.00544	1.96	0.254	U	0.521	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Am-241	pCi/g	0.0195	0.181	0.181	1.96	0.151	U	0.313	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-152	pCi/g	0.133	0.270	0.271	1.96	0.175	U	0.369	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Eu-154	pCi/g	0.0289	0.0582	0.0583	1.96	0.0524	U	0.111	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Cs-137	pCi/g	-0.00328	0.0829	0.0829	1.96	0.0694	U	0.152	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Co-60	pCi/g	0.0238	0.0731	0.0731	1.96	0.0389	U	0.0967	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Ra-226	pCi/g	0.562	0.175	0.184	1.96	0.0741		0.171		30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-155	pCi/g	0.0845	0.208	0.208	1.96	0.377	U	0.772	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Am-241	pCi/g	0.0454	0.193	0.193	1.96	0.160	U	0.335	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-152	pCi/g	0.0565	0.0849	0.0851	1.96	0.104	U	0.222	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Eu-154	pCi/g	0.0477	0.111	0.112	1.96	0.0912	U	0.192	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Cs-137	pCi/g	-0.0529	0.0797	0.0799	1.96	0.0634	U	0.136	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Co-60	pCi/g	0.0569	0.0322	0.0327	1.96	0.0111		0.035		30
160-43306-6	SAMP	FSS-176-082821	Soil	Ra-226	pCi/g	0.443	0.126	0.134	1.96	0.0370		0.0892		30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-155	pCi/g	0.00	0.0618	0.0618	1.96	0.161	U	0.334	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Am-241	pCi/g	0.0102	0.166	0.166	1.96	0.139	U	0.289	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-152	pCi/g	0.0924	0.125	0.125	1.96	0.0937	U	0.196	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Eu-154	pCi/g	0.0928	0.146	0.147	1.96	0.0568		0.120	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Cs-137	pCi/g	-0.049	0.0814	0.0816	1.96	0.0639	U	0.140	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Co-60	pCi/g	0.0141	0.0143	0.0144	1.96	0.0152	U	0.0481	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Ra-226	pCi/g	0.102	0.0899	0.0905	1.96	0.179	U	0.380	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-155	pCi/g	0.0397	0.108	0.109	1.96	0.185	U	0.387	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Am-241	pCi/g	0.0685	0.156	0.156	1.96	0.127	U	0.269	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-152	pCi/g	0.141	0.193	0.194	1.96	0.0943		0.201	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Eu-154	pCi/g	0.0593	0.104	0.104	1.96	0.0684	U	0.145	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Cs-137	pCi/g	0.00	0.0397	0.0397	1.96	0.0472	U	0.106	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Co-60	pCi/g	0.00359	0.0211	0.0211	1.96	0.0146	U	0.0462	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Ra-226	pCi/g	-0.04245	0.187	0.187	1.96	0.219	U	0.458	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-155	pCi/g	0.00	0.0844	0.0844	1.96	0.185	U	0.386	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Am-241	pCi/g	0.05809	0.135	0.135	1.96	0.0874	U	0.188	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-152	pCi/g	0.09254	0.183	0.183	1.96	0.0798		0.171	U	30
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Eu-154	pCi/g	0.07244	0.138	0.138	1.96	0.0553		0.119	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Cs-137	pCi/g	0.291	0.0819	0.0869	1.96	0.0258		0.0615		30
160-43306-8	SAMP	FSS-178-090221	Soil	Co-60	pCi/g	0.0123	0.0596	0.0596	1.96	0.0291	U	0.0725	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	K-40	pCi/g	5.93	1.10	1.24	1.96	0.123		0.390		30
160-43306-8	SAMP	FSS-178-090221	Soil	Na-22	pCi/g	0.0271	0.0406	0.0407	1.96	0.0282	U	0.0701	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Zn-65	pCi/g	-0.044	0.184	0.184	1.96	0.151	U	0.326	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Ra-226	pCi/g	0.59	0.168	0.178	1.96	0.0732		0.164		30
160-43306-8	SAMP	FSS-178-090221	Soil	Ac-228	pCi/g	0.698	0.223	0.234	1.96	0.0623		0.161		30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-155	pCi/g	-0.124	0.411	0.411	1.96	0.343	U	0.699	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Am-241	pCi/g	-0.0941	0.223	0.223	1.96	0.185	U	0.380	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-152	pCi/g	0.0858	0.159	0.160	1.96	0.108	U	0.226	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Bi-214	pCi/g	0.59	0.168	0.178	1.96	0.0732		0.164		30
160-43306-8	SAMP	FSS-178-090221	Soil	Bi-212	pCi/g	-0.312	0.920	0.920	1.96	0.748	U	1.62	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Pb-214	pCi/g	0.64	0.163	0.175	1.96	0.0714		0.157		30
160-43306-8	SAMP	FSS-178-090221	Soil	Pb-212	pCi/g	0.681	0.118	0.137	1.96	0.0593		0.128		30
160-43306-8	SAMP	FSS-178-090221	Soil	Eu-154	pCi/g	0.108	0.137	0.137	1.96	0.0741		0.155	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Th-232	pCi/g	0.698	0.223	0.234	1.96	0.0623		0.161		30
160-43306-9	SAMP	FSS-179-090221	Soil	Cs-137	pCi/g	0.141	0.053	0.0549	1.96	0.0185		0.044		30
160-43306-9	SAMP	FSS-179-090221	Soil	Co-60	pCi/g	0.00684	0.0297	0.0297	1.96	0.0208	U	0.0518	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	K-40	pCi/g	7.34	1.03	1.27	1.96	0.0882		0.279		30
160-43306-9	SAMP	FSS-179-090221	Soil	Na-22	pCi/g	0.029	0.0201	0.0203	1.96	0.0084		0.0267		30

160-43306-9	SAMP	FSS-179-090221	Soil	Zn-65	pCi/g	0.00	0.0309	0.0309	1.96	0.106	U	0.229	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Ra-226	pCi/g	0.582	0.122	0.136	1.96	0.0427		0.0974		30
160-43306-9	SAMP	FSS-179-090221	Soil	Ac-228	pCi/g	0.950	0.158	0.184	1.96	0.0223		0.0707		30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-155	pCi/g	-0.0966	0.407	0.407	1.96	0.341	U	0.691	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Am-241	pCi/g	-0.0252	0.155	0.155	1.96	0.0981	U	0.204	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-152	pCi/g	0.151	0.164	0.164	1.96	0.0768		0.161	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Bi-214	pCi/g	0.582	0.122	0.136	1.96	0.0427		0.0974		30
160-43306-9	SAMP	FSS-179-090221	Soil	Bi-212	pCi/g	0.391	0.696	0.697	1.96	0.5560	U	1.20	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Pb-214	pCi/g	0.562	0.108	0.122	1.96	0.0361		0.0821		30
160-43306-9	SAMP	FSS-179-090221	Soil	Pb-212	pCi/g	0.723	0.0932	0.131	1.96	0.0373		0.0811		30
160-43306-9	SAMP	FSS-179-090221	Soil	Eu-154	pCi/g	0.0536	0.130	0.130	1.96	0.0500		0.105	U	30
160-43306-9	SAMP	FSS-179-090221	Soil	Th-232	pCi/g	0.950	0.158	0.184	1.96	0.0223		0.0707		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Cs-137	pCi/g	26.25	0.557	2.73	1.96	0.0707		0.149		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Co-60	pCi/g	8.483	0.263	0.875	1.96	0.0276		0.0665		30
LCS 160-525951/2-A	QC_LCS	LCS 160-525951/2-A	Soil	Am-241	pCi/g	98.63	1.42	10.1	1.96	0.495		0.999		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Cs-137	pCi/g	26.51	0.625	2.77	1.96	0.0798		0.169		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Co-60	pCi/g	8.408	0.296	0.879	1.96	0.0435		0.101		30
LCS 160-526074/2-A	QC_LCS	LCS 160-526074/2-A	Soil	Am-241	pCi/g	100.5	1.42	10.3	1.96	0.540		1.09		30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Cs-137	pCi/g	-0.006036	0.0599	0.0599	1.96	0.0344	U	0.0798	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Co-60	pCi/g	0.03189	0.0295	0.0297	1.96	0.0136		0.043	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Ra-226	pCi/g	-0.006501	0.155	0.155	1.96	0.129	U	0.278	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-155	pCi/g	0.0009131	0.137	0.137	1.96	0.115	U	0.245	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Am-241	pCi/g	0.00	0.0573	0.0573	1.96	0.0744	U	0.161	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-152	pCi/g	0.04119	0.0513	0.0514	1.96	0.0744	U	0.160	U	30
MB 160-525951/1-A	QC_BLK	MB 160-525951/1-A	Soil	Eu-154	pCi/g	-0.03973	0.0811	0.0812	1.96	0.0659	U	0.139	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Cs-137	pCi/g	0.00	0.0131	0.0131	1.96	0.0156	U	0.044	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Co-60	pCi/g	-0.01799	0.0769	0.0769	1.96	0.0374	U	0.0931	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	K-40	pCi/g	0.06795	0.799	0.799	1.96	0.388	U	0.960	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Na-22	pCi/g	-0.01739	0.0478	0.0478	1.96	0.0362	U	0.0900	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Zn-65	pCi/g	0.00	0.0228	0.0228	1.96	0.102	U	0.235	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Ra-226	pCi/g	0.01152	0.0575	0.0576	1.96	0.168	U	0.358	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Ac-228	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-155	pCi/g	-0.1013	0.355	0.356	1.96	0.296	U	0.609	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Am-241	pCi/g	-0.05699	0.160	0.160	1.96	0.131	U	0.277	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-152	pCi/g	0.1107	0.0767	0.0775	1.96	0.0757		0.165	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Bi-214	pCi/g	0.01152	0.0575	0.0576	1.96	0.168	U	0.358	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Bi-212	pCi/g	0.3075	0.642	0.643	1.96	0.494	U	1.14	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Pb-214	pCi/g	0.002072	0.00233	0.00234	1.96	0.114	U	0.245	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Pb-212	pCi/g	-0.0001431	0.108	0.108	1.96	0.0898	U	0.191	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Eu-154	pCi/g	0.01246	0.066	0.0661	1.96	0.0545	U	0.118	U	30
MB 160-526074/1-A	QC_BLK	MB 160-526074/1-A	Soil	Th-232	pCi/g	0.1036	0.188	0.189	1.96	0.0913		0.230	U	30
160-43306-1	SAMP	FSS-171-082821	Soil	Ni-63	pCi/g	1.01	0.947	0.953	1.96	0.777		1.62	U	60
160-43306-10	SAMP	FSS-180-090221	Soil	Ni-63	pCi/g	0.853	0.945	0.949	1.96	0.793		1.66	U	60
160-43306-2	SAMP	FSS-172-082821	Soil	Ni-63	pCi/g	0.667	0.909	0.912	1.96	0.754	U	1.58	U	60
160-43306-3	SAMP	FSS-173-082821	Soil	Ni-63	pCi/g	0.485	0.859	0.861	1.96	0.719	U	1.50	U	60
160-43306-4	SAMP	FSS-174-082821	Soil	Ni-63	pCi/g	1.12	1.07	1.08	1.96	0.886		1.85	U	60
160-43306-5	SAMP	FSS-175-082821	Soil	Ni-63	pCi/g	0.51	0.919	0.921	1.96	0.773	U	1.62	U	60
160-43306-6	SAMP	FSS-176-082821	Soil	Ni-63	pCi/g	0.54	0.826	0.828	1.96	0.681	U	1.42	U	60
160-43306-7	SAMP	FSS-177-082821	Soil	Ni-63	pCi/g	0.387	0.904	0.905	1.96	0.770	U	1.61	U	60
160-43306-7 DU	QC_DUP	160-43306-7 DU	Soil	Ni-63	pCi/g	-0.268	0.873	0.874	1.96	0.760	U	1.59	U	60
160-43306-8	SAMP	FSS-178-090221	Soil	Ni-63	pCi/g	0.762	0.944	0.947	1.96	0.781	U	1.63	U	60
160-43306-9	SAMP	FSS-179-090221	Soil	Ni-63	pCi/g	0.170	0.859	0.859	1.96	0.734	U	1.53	U	60
LCS 160-529541/2-A	QC_LCS	LCS 160-529541/2-A	Soil	Ni-63	pCi/g	20.84	1.67	2.70	1.96	0.819		1.71		60
MB 160-529541/1-A	QC_BLK	MB 160-529541/1-A	Soil	Ni-63	pCi/g	4.762	1.15	1.25	1.96	0.819		1.71		60
160-43306-1	SAMP	FSS-171-082821	Soil	Pu-241	pCi/g	0.384	3.17	3.17	1.96	2.65	U	5.70	U	30
160-43306-10	SAMP	FSS-180-090221	Soil	Pu-241	pCi/g	-0.716	1.78	1.78	1.96	1.53	U	3.28	U	30
160-43306-2	SAMP	FSS-172-082821	Soil	Pu-241	pCi/g	-0.813	3.38	3.38	1.96	2.89	U	6.19	U	30
160-43306-3	SAMP	FSS-173-082821	Soil	Pu-241	pCi/g	0.273	2.55	2.55	1.96	2.12	U	4.54	U	30
160-43306-4	SAMP	FSS-174-082821	Soil	Pu-241	pCi/g	-0.911	2.57	2.57	1.96	2.19	U	4.70	U	30
160-43306-5	SAMP	FSS-175-082821	Soil	Pu-241	pCi/g	-2.65	2.47	2.48	1.96	2.24	U	4.82	U	30
160-43306-6	SAMP	FSS-176-082821	Soil	Pu-241	pCi/g	-0.751	2.62	2.62	1.96	2.25	U	4.82	U	30
160-43306-7	SAMP	FSS-177-082821	Soil	Pu-241	pCi/g	-0.151	2.40	2.40	1.96	2.02	U	4.34	U	30
160-43306-8	SAMP	FSS-178-090221	Soil	Pu-241	pCi/g	-1.01	1.92	1.92	1.96	1.66	U	3.57	U	30

160-43306-9	SAMP	FSS-179-090221	Soil	Pu-241	pCi/g	-1.06	1.79	1.80	1.96	1.57	U	3.37	U	30
LCS 160-526531/2-A	QC_LCS	LCS 160-526531/2-A	Soil	Pu-241	pCi/g	18.68	2.60	3.08	1.96	1.27		2.73		30
MB 160-526531/1-A	QC_BLK	MB 160-526531/1-A	Soil	Pu-241	pCi/g	0.1078	1.39	1.39	1.96	1.15	U	2.47	U	30