



Westinghouse Electric Company
Nuclear Fuel
Columbia Fuel Fabrication Facility
5801 Bluff Road
Hopkins, South Carolina 29061
USA

SCDHEC, BLWM
Kim Kuhn
2600 Bull Street
Columbia, SC 29201

Direct tel: 803.647.1920
Direct fax: 803.695.3964
e-mail: joynerdp@westinghouse.com
Your ref:
Our ref: LTR-RAC-20-15

February 5, 2020

Subject: January 2020 CA Progress Report

Ms. Kuhn:

In accordance with Item 19 of Consent Agreement (CA) 19-02-HW, this progress report is being submitted to you, including the following requested information:

- (a) a brief description of the actions which Westinghouse has taken toward achieving compliance with the Consent Agreement during the previous month;
- (b) results of sampling and tests, in tabular summary format received by Westinghouse during the reporting period;
- (c) brief description of all actions which are scheduled for the next month to achieve compliance with the Consent Agreement, and other information relating to the progress of the work as deemed necessary or requested by the Department; and
- (d) information regarding the percentage of work completed and any delays encountered or anticipated that may affect the approved schedule for implementation of the terms of the Consent Agreement, and a description of efforts made to mitigate delays or avoid anticipated delays.

In response to the above requirements, the following is being reported to the Department since the last progress report on **January 6, 2020**:

- (a) Actions during the previous month:
Westinghouse began implementation of the Remedial Investigation (RI) Work Plan on 6/10/19. To comply with **Item 4** of the CA, the following actions were completed this month.
 - Met with the Department on 1/9/2020 to discuss the status and next steps for the Remedial Investigation data and updated Conceptual Site Model (CSM)
 - Conducted slug tests in the four newly installed floodplain wells (W-94 through W-97) on 1/14/20
 - Submitted LTR-RAC-20-11, "Technetium Source Investigation Work Plan" on 1/30/2020

- Submitted LTR-RAC-20-14, “Westinghouse Columbia Fuel Fabrication Facility Remedial Investigation Interim Data” on 1/31/2020.
- Shipped Tributyl Phosphate (TBP) Solvent / tetrachloroethylene / kerosene / uranium mixture from V-1454 tanks to Energy Solutions on 12/30/2019 and 1/31/2020
- Updated the site map with bluff lines, providing indications for the geographic locations of the top and bottom of the bluff (**Attachment A**)
- Completed the following activities to support the Southern Storage Area (SSA) Operable Unit (OU) per Work Plan Addendum 1
 - Emptied intermodal containers
 - Four intermodal containers (C-57, C-58, C-61 and C-63) containing Wet Combustible Material (WCM) were safely emptied of their contents. Two intermodal containers with Dry Combustible Material (DCM) were transferred to other empty intermodal containers for offsite disposal.
 - Intermodal container **C-57** was safely emptied of its contents on 1/14/2020. C-57 was then reloaded on 1/28/2020 with dry combustible material from C-53 for off-site disposal of the container and its contents as low-level radioactive waste.
 - Intermodal container **C-58** was safely emptied of its contents on 1/6/2020. C-58 was then reloaded on 1/8/2020 with dry combustible material from C-60 for off-site disposal of the container and its contents as low-level radioactive waste.
 - Intermodal container **C-60** was safely emptied of its contents on 1/08/2020.
 - Intermodal container **C-61** was safely emptied of its contents on 1/30/2020.
 - Intermodal container **C-63** was safely emptied of its contents on 1/23/2020.
 - Intermodal container **C-66** was safely emptied of its contents on 2/04/2020.
 - Three DCM intermodal containers and one empty intermodal container were loaded onto trailers and shipped offsite as low level radioactive waste. Six empty intermodal containers were sent to Commercial Metals Company (CMC) for recycling.
 - Collected soil samples underneath the following removed intermodal containers: C-67, C-59, C-51, C-58, C-52, C-39, C-43, C-33, S-50 (C-27), C-16, S-3
 - No excavations in these areas were needed, as Health Physics surveys did not indicate soil contamination
 - A total of three (3) bias soil samples were collected, based on the Health Physics surveys conducted inside the intermodal containers

(b) Results of sampling and tests:

- Interim data from the Remedial Investigation were submitted on a CD in pdf format to the Department on 1/31/2020 as part of LTR-RAC-20-14, “Westinghouse Columbia Fuel Fabrication Facility Remedial Investigation Interim Data”
- Boring logs from Phase I of the Remedial Investigation were submitted on a CD in pdf format to the Department on February 5, 2020
- Southern Storage Area Operable Unit Soil Sampling Results for initial samples collected on November 13, 2019 and subsequent confirmatory samples collected on January 7, 2020
(Attachment B)

(c) Brief description of all actions which are scheduled for the next month:

- In accordance with **Item 4** of the CA, Westinghouse will continue to implement the Work Plan to include the following actions:
 - Continue emptying intermodal containers in the SSAOU.
 - Conduct soil sampling under removed intermodal containers per Department-approved Operable Unit Intermodal Container Work Plan (LTR-RAC-19-87, October 30)
 - Initiate Technetium Source Investigation Work Plan
 - Mobilize a crane to remove intermodal containers designated for scrap metal recycle or disposal as low-level radioactive waste.
 - Submit analysis results (as available) for sampling performed in January underneath previously removed intermodal containers in the SSAOU
 - Submit the Westinghouse Columbia Fuel Fabrication Facility Interim Remedial Investigation Data Summary on or before February 28, 2020
 - Continue shipment of the TBP Solvent / tetrachloroethylene / kerosene / uranium mixture from V-1454 tanks sent to Energy Solutions for disposal

(d) Percentage of work completed and any delays encountered or anticipated:

- 4/4 (100%) slug tests in the newly installed wells in the floodplain

Since the last progress report, there has been a change in key project personnel identified in the RI Work Plan submitted to the Department in June of 2019. Per Section 5 “Key Project Personnel, this change must be communicated to the Department in writing. This monthly report serves as notification that the project management role, formerly held by Hope Taylor, with GEL Laboratories is now being filled by Katelyn Gray.

Respectfully,

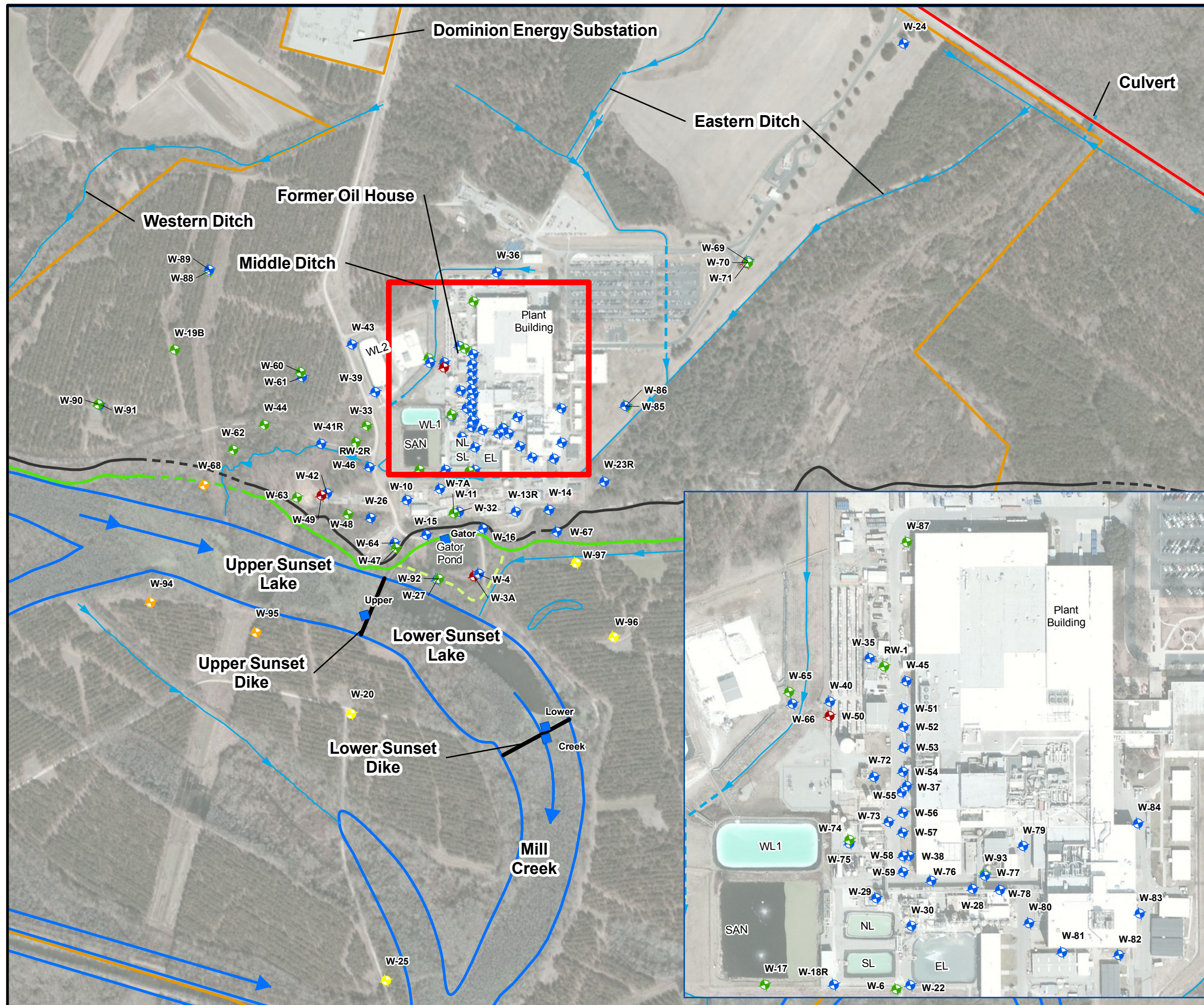


Diana P. Joyner
Principal Environmental Engineer
Westinghouse Electric Company, CFFF
803.497.7062 (m)

Cc: N. Parr, Environmental Manager
J. Ferguson, EH&S Manager
J. Grant, AECOM Project Manager
ENOVIA Record

Attachment A

Updated Site Map with Bluff Lines



Legend

- Ditch
- Culvert
- Mill Creek Flow Direction
- EL East Lagoon
- NL North Lagoon
- SL South Lagoon
- SAN Sanitary Lagoon
- WL1 West Lagoon I
- WL2 West Lagoon II
- Upper Surficial Aquifer
- Lower Surficial Aquifer
- Black Mingo Aquifer
- Upper Floodplain Well
- Lower Floodplain Well
- Mill Creek
- Property Line
- SCRDI Bluff Road (Superfund Site)
- Dike Location
- Staff Gauge Location
- Top of Bluff
- Inferred Top of Bluff
- Bottom of Bluff
- Inferred Bottom of Bluff
- Secondary Bluff Area



Map Projection: NAD 1983, South Carolina State Plane, FIPS 3900, Feet
Datum: North American 1983



101 Research Drive
Columbia, SC 29203
T: (803) 254-4400 F: (803) 771-6676

Site Map

WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY
HOPKINS, SOUTH CAROLINA

PROJECT NO. 60595649	PREPARED BY: CCS	DATE: February 2020	FIGURE 2
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Attachment B

Southern Storage Area Operable Unit Soil Sampling Results

Tabulated Soil Sampling Results

Drawing with Soil Sample Results

Initial Sampling Event

Sampling conducted: November 13, 2019

GEL Work Order: 497105

Report Date: January 16, 2020

Confirmatory Sampling Event

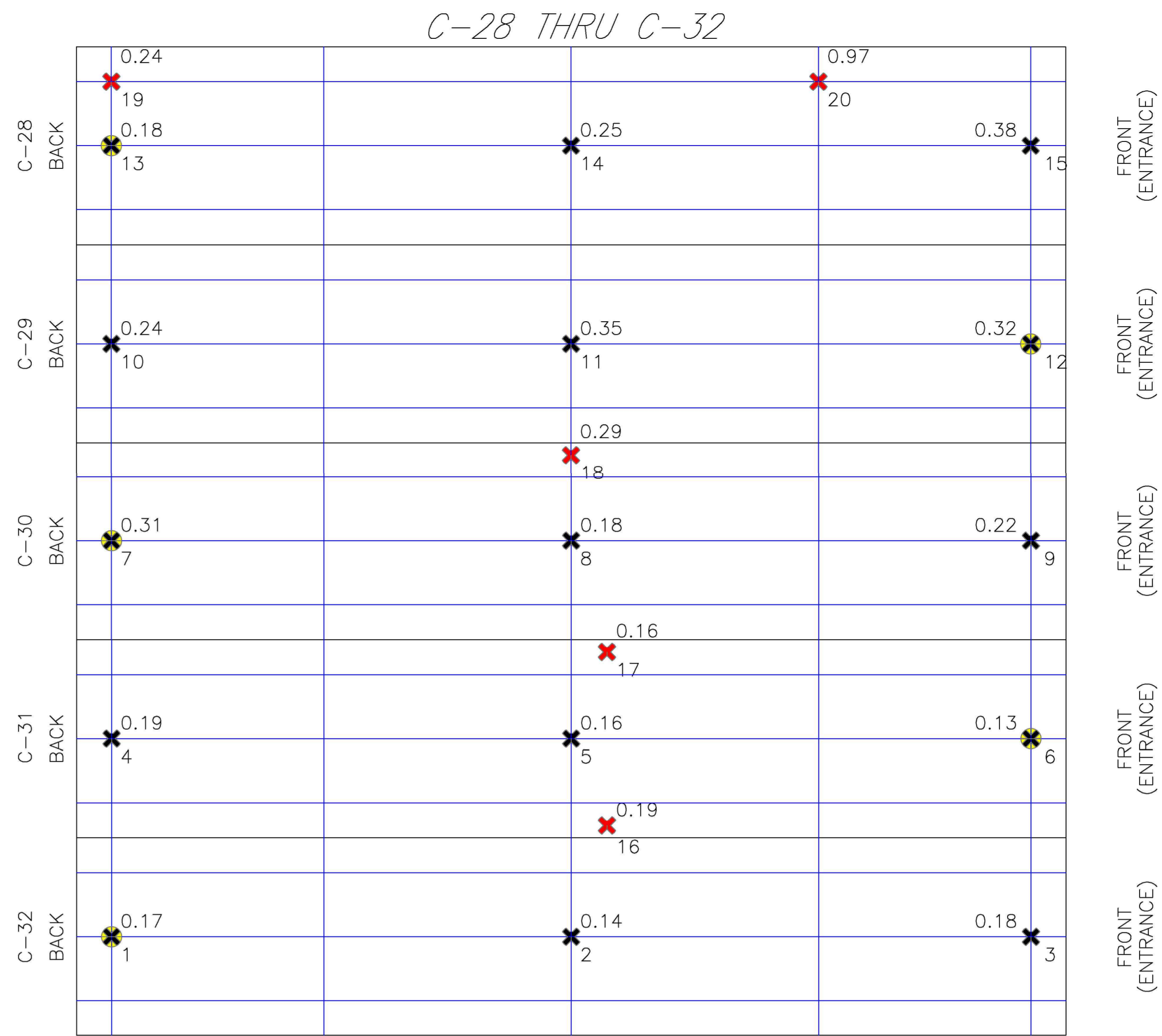
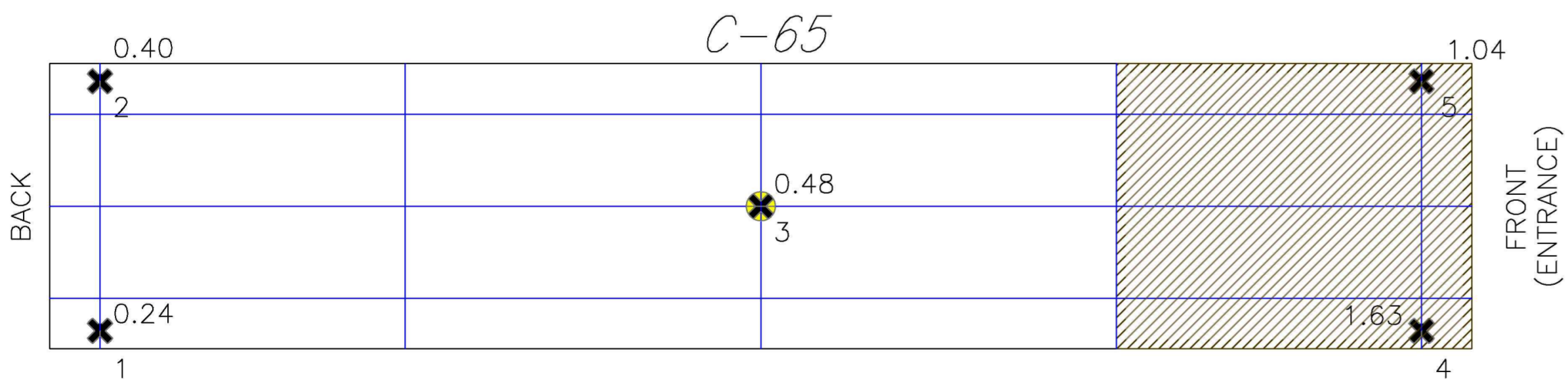
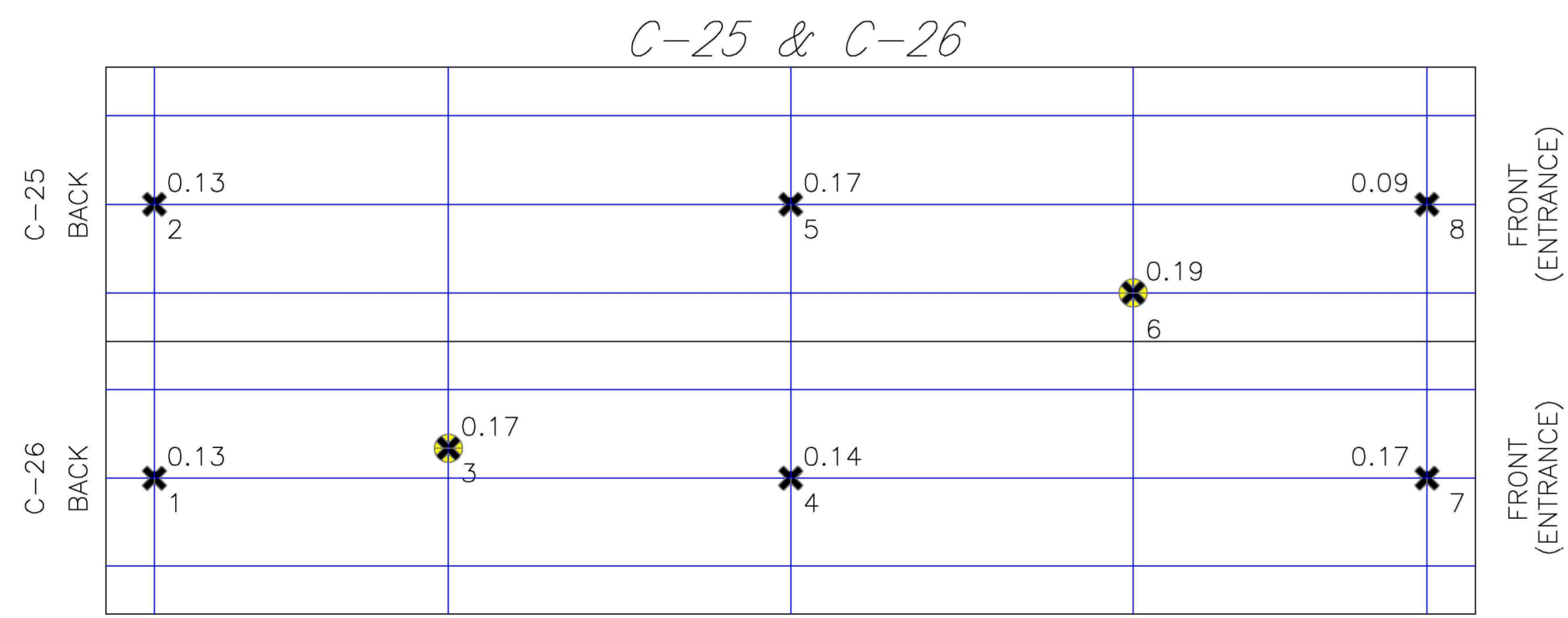
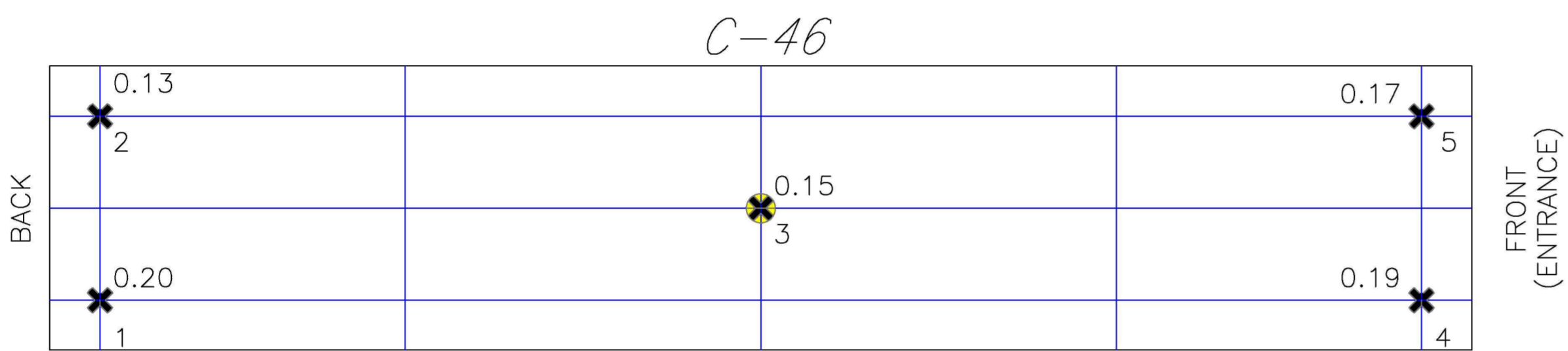
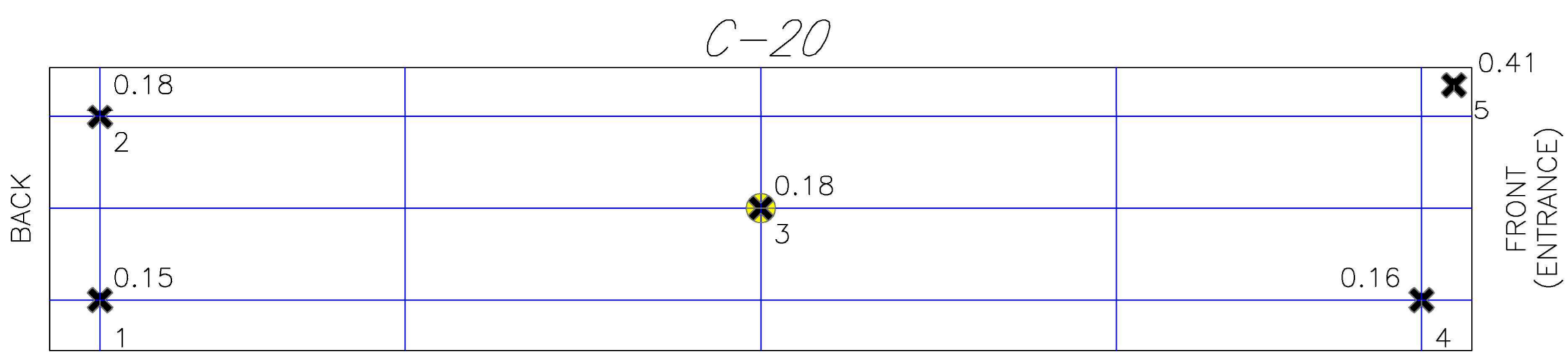
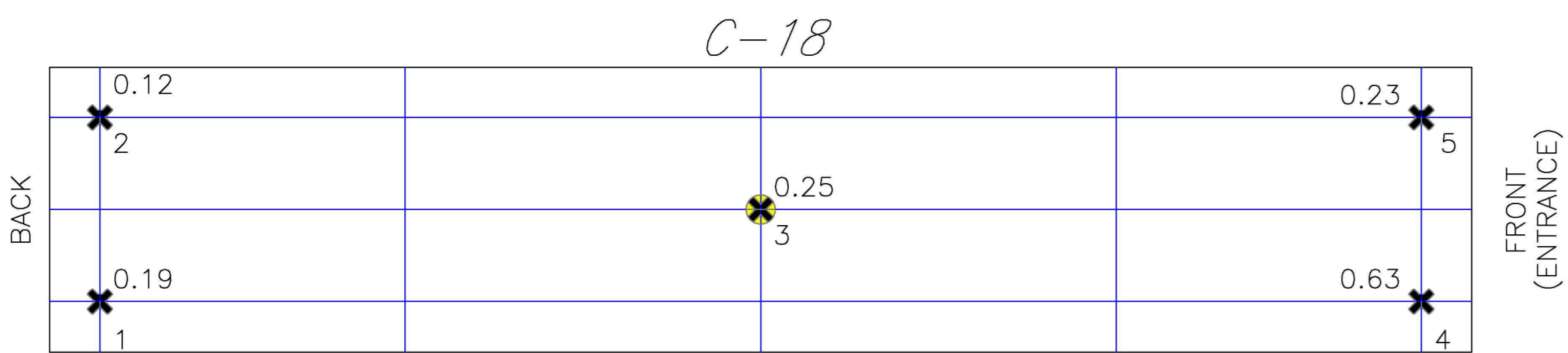
Sampling conducted: January 7, 2020

GEL Work Order: 500519

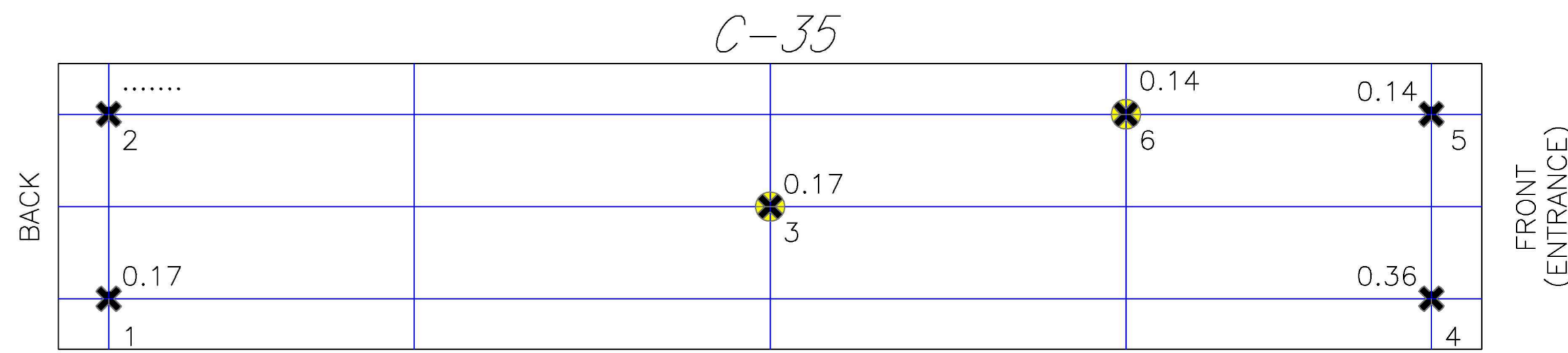
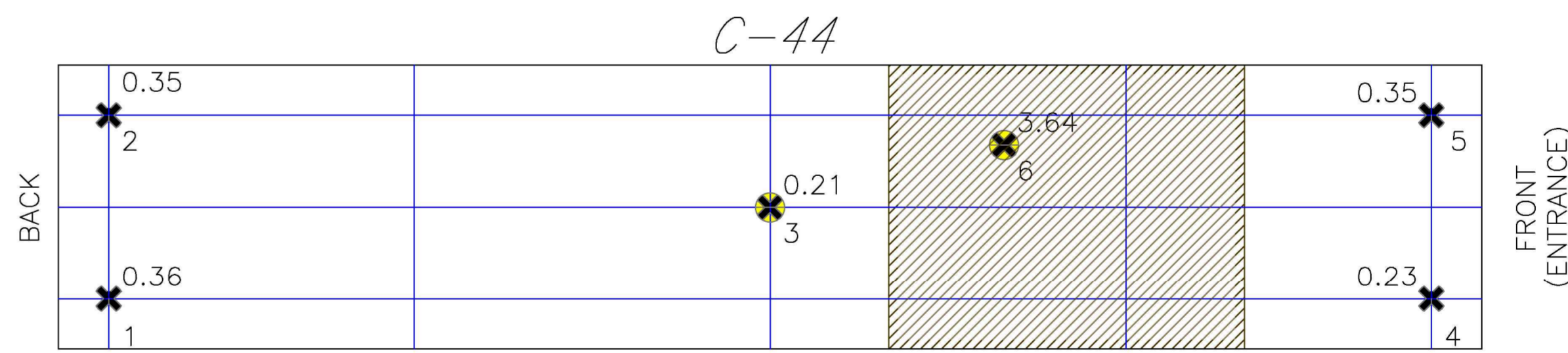
Report Date: January 15, 2020

Tabulated Soil Sampling Results

Sample ID	Analyte (pCi/g)								SOF Resid.	SOF Ind.	mg/kg Fluoride	Residential Limits in Soil (per RA-433)	
	U-234	U-235 DL	U-235	U-238	Sum U	Tc-99 DL	Tc-99						
C-18-1	1.6	< 0.0725	0.0417	0.845	2.4867	< 4.64	0	0.19	0.01	<	0.39	U234	13 pCi/g
C-18-2	0.862	< 0.0829	0.0477	0.675	1.5847	< 4.25	0	0.12	0.01	<	1.08	U235	8 pCi/g
C-18-3	1.56	< 0.0851	0.0313	0.787	2.3783	< 4.29	1.32	0.25	0.01	<	0.37	U238	14 pCi/g
C-18-4	6.09		0.132	2.08	8.302	< 4.33	0	0.63	0.02	<	1.24	Tc-99	19 pCi/g
C-18-5	1.8		0.0613	1.14	3.0013	< 4.48	0	0.23	0.01	<	1.90	Fluoride	600 mg/kg
C-20-1	1.21	< 0.0480	0.032	0.774	2.016	< 4.45	0	0.15	0.01	<	0.37	PCE	0.0023 mg/kg
C-20-2	1.61	< 0.0880	0.069	0.717	2.396	< 4.54	0	0.18	0.01	<	0.35		
C-20-3	1.43		0.11	0.773	2.313	< 4.53	0	0.18	0.01	<	0.36		
C-20-4	1.18	< 0.1050	0.0289	0.881	2.0899	< 4.32	0	0.16	0.01	<	0.86		
C-20-5	3.37		0.227	1.72	5.317	< 4.37	0.0546	0.41	0.02	<	3.46		
C-25+26-1	0.888	< 0.0951	0.0355	0.734	1.6575	< 4.66	0	0.13	0.01	<	0.39		
C-25+26-2	0.777	< 0.0707	0.0259	0.937	1.7399	< 4.14	0	0.13	0.01	<	0.48		
C-25+26-3	1.38	< 0.0988	0.0271	0.845	2.2521	< 4.03	0	0.17	0.01	<	1.27		
C-25+26-4	1.05		0.115	0.601	1.766	< 4.36	0	0.14	0.01	<	0.37		
C-25+26-5	1.57	< 0.1490	0.0312	0.701	2.3022	< 4.17	0	0.17	0.01	<	0.48		
C-25+26-6	1.6	< 0.1240	0.0562	0.831	2.4872	< 4.14	0	0.19	0.01	<	0.80		
C-25+26-7	1.15	< 0.1030	0.0281	0.997	2.1751	< 4.20	0.167	0.17	0.01	<	2.04		
C-25+26-8	0.622	< 0.1170	0.0322	0.494	1.1482	< 4.33	0	0.09	0.00	<	3.80		
Sample ID	Analyte (pCi/g)								SOF Resid.	SOF Ind.	mg/kg Fluoride	Residential Limits in Soil (per RA-433)	
	U-234	U-235 DL	U-235	U-238	Sum U	Tc-99 DL	Tc-99						
C-65-1	2.09		0.0938	0.958	3.1418	< 4.32	0	0.24	0.01	<	0.98		
C-65-2	3.35	< 0.1480	0.0801	1.9	5.3301	< 4.07	0	0.40	0.01	<	1.03		
C-65-3	4.32		0.265	1.65	6.235	< 3.79	0	0.48	0.02	<	0.89		
C-65-4	15.5		0.773	4.79	21.063	< 3.68	0	1.63	0.05	<	2.79		
C-65-5	9.85		0.608	2.88	13.338	< 3.37	0	1.04	0.03	<	1.10		
C-46-1	1.26		0.228	1.1	2.588	< 3.57	0	0.20	0.01	<	0.79		
C-46-2	0.685		0.102	0.942	1.729	< 3.50	0	0.13	0.01	<	0.36		
C-46-3	1.23		0.154	0.522	1.906	< 3.89	0	0.15	0.01	<	0.93		
C-46-4	1.4		0.195	0.796	2.391	< 3.79	0	0.19	0.01	<	1.13		
C-46-5	1.07	< 0.1180	0.0826	0.785	1.9376	< 3.74	0.382	0.17	0.01	<	1.70		
C-35-1	1.31	< 0.0908	0.0902	0.851	2.2512	< 3.55	0	0.17	0.01	<	0.41		
C-35-2	1.54	< 0.1130	0.0514	0.901	2.4924	< 4.03	0	0.19	0.01	<	0.40		
C-35-3	1.49	< 0.0873	0	0.83	2.32	< 3.71	0	0.17	0.01	<	1.59		
C-35-4	2.5		0.241	1.85	4.591	< 3.70	0.172	0.36	0.02	<	4.73		
C-35-5	1.07		0.0655	0.696	1.8315	< 3.78	0	0.14	0.01	<	0.37		
C-35-6	1.05	< 0.0963	0.0612	0.686	1.7972	< 3.76	0	0.14	0.01	<	1.37		
Sample ID	Analyte (pCi/g)								SOF Resid.	SOF Ind.	mg/kg Fluoride	Residential Limits in Soil (per RA-433)	
	U-234	U-235 DL	U-235	U-238	Sum U	Tc-99 DL	Tc-99						
C-44-1	3.36		0.245	0.982	4.587	< 3.60	0	0.36	0.01	<	0.58		
C-44-2	3.02		0.227	1.32	4.567	< 3.84	0	0.35	0.01	<	0.39		
C-44-3	1.55	< 0.1030	0.0594	1.22	2.8294	< 3.92	0	0.21	0.01	<	0.71		
C-44-4	1.84		0.142	0.942	2.924	< 3.86	0	0.23	0.01	<	0.73		
C-44-5	3.21		0.112	1.27	4.592	< 4.11	0	0.35	0.01	<	0.73		
C-44-6	38.5		1.92	6.07	46.49	< 4.12	0	3.64	0.09	<	1.92		
C-32-1	1.18		0.146	0.814	2.14	< 3.06	0	0.17	0.01	<	0.38		
C-32-2	0.917	< 0.0832	0.0305	0.523	1.4705	< 2.95	0.513	0.14	0.00	<	0.39		
C-32-3	1.33		0.118	0.832	2.28	< 3.63	0	0.18	0.01	<	0.38		
C-31-4	1.21		0.102	0.858	2.17	< 2.87	0.342	0.19	0.01	<	1.22		
C-31-5	1.1		0.0837	0.855	2.0387	< 3.15	0	0.16	0.01	<	2.03		
C-31-6	0.89		0.0684	0.512	1.4704	< 3.16	0.321	0.13	0.00	<	1.01		
C-30-7	1.24		0.095	0.688	2.023	< 2.94	2.87	0.31	0.01	<	1.76		
C-30-8	1.52	< 0.0863	0.0317	0.761	2.3127	< 3.20	0	0.18	0.01	<	0.89		
C-30-9	1.59		0.13	0.966	2.686	< 3.17	0.287	0.22	0.01	<	0.76		
C-29-10	1.82		0.144	0.831	2.795	< 3.20	0.446	0.24	0.01	<	1.34		
C-29-11	3.39		0.135	0.969	4.494	< 3.20	0	0.35	0.01	<	3.75		
C-29-12	2.84		0.0928	1.26	4.1928	< 3.07	0	0.32	0.01	<	1.60		
Sample ID	Analyte (pCi/g)								SOF Resid.	SOF Ind.	mg/kg Fluoride	Residential Limits in Soil (per RA-433)	
	U-234	U-235 DL	U-235	U-238	Sum U	Tc-99 DL	Tc-99						
C-28-13	1.49	< 0.0758	0.0436	0.797	2.3306	< 3.36	0	0.18	0.01	<	2.08		
C-28-14	1.96		0.138	1.2	3.298	< 3.50	0	0.25	0.01	<	2.29		
C-28-15	3.31		0.262	1.23	4.802	< 3.28	0	0.38	0.01	<	2.90		
C-31-16	1.27	< 0.1050	0.0854	1.08	2.4354	< 3.28	0	0.19	0.01	<	0.77		
C-31-17	1.19	< 0.0458	0.0306	0.835	2.0556	< 3.51	0	0.16	0.01	<	1.66		
C-30-18	2.44		0.125	1.22	3.785	< 3.13	0	0.29	0.01	<	2.21		
C-28-19	2.18	< 0.0576	0.0384	0.887	3.1054	< 3.27	0	0.24	0.01	<	1.13		
C-28-20	9.14		0.672	2.11	11.922	< 3.30	0.565	0.97	0.03	<	3.00		



- ✖ BIAS SAMPLE
- ✖ SYSTEMATIC SAMPLE
- ⊗ SYSTEMATIC SAMPLE WITH VOC
- ▨ CONTAMINATED SOIL REMOVED TO 2 FEET DEPTH



CHANGE	
NO.	

WESTINGHOUSE PROPRIETARY CLASS 2
 THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO WESTINGHOUSE ELECTRIC COMPANY LLC - NUCLEAR FUEL. IT IS SUBMITTED IN CONFIDENCE AND IS TO BE USED SOLELY FOR THE PURPOSE FOR WHICH IT IS FURNISHED. WHEN RETURNED UPON REQUEST, THIS DOCUMENT AND SUCH INFORMATION IS NOT TO BE REPRODUCED, TRANSMITTED, DISCLOSED OR USED OTHERWISE IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE WESTINGHOUSE ELECTRIC COMPANY LLC - NUCLEAR FUEL.

DFTM	W.D. HERLONG	01/28/2020
CHKD		
APPD		
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APPD		

Westinghouse ELECTRIC COMPANY LLC - NUCLEAR FUEL
 COLUMBIA, S.C. USA

AREA / PROCESS

TITLE: SUM OF FRACTIONS OF ISOTOPIC URANIUM IN IN SOIL BENEATH SEA-LANDS

SCALE	REGN NO	DWG NO	REV
N/A		N/A	1

SHEET 01 of 01 SHEETS
 AUTOCAD DRAWING DO NOT REVISE MANUALLY



January 16, 2020

Ms. Cynthia Logsdon
Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina 29205

Re: ENV-CONSENTA-4500778461
Work Order: 497105

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 20, 2019. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. This package is being resubmitted to include revised TC99 results.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Hope Taylor
Project Manager

Purchase Order: 4500778461-2
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 497105 GEL Work Order: 497105

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Hope Taylor.

Reviewed by _____

top a d

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-1 Project: WNUC01519
Sample ID: 497105001 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 12:02
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.8%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.388	1.14	mg/kg	9.95	1	LXA2	11/23/19	0242	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		57.0	2.18	15.3	ug/kg	95.1	2	PRB	11/30/19	1844	1941291	2
Uranium-238		2660	14.4	43.6	ug/kg	95.1	2					
Uranium-234	U	ND	2.18	10.9	ug/kg	95.1	2	PRB	12/02/19	1629	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-18-2	Project:	WNUC01519
Sample ID:	497105002	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:06		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	9.79%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.08	0.373	1.10	mg/kg	9.90	1	LXA2	11/23/19	0411	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		20.0	2.07	14.5	ug/kg	93.3	2	PRB	11/30/19	1856	1941291	2
Uranium-238		1480	13.7	41.4	ug/kg	93.3	2					
Uranium-234	U	ND	2.07	10.3	ug/kg	93.3	2	PRB	12/02/19	1641	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-18-3	Project:	WNUC01519
Sample ID:	497105003	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:10		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	8.27%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.368	0.366	1.08	mg/kg	9.88	1	LXA2	11/23/19	0441	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		62.7	2.14	15.0	ug/kg	98.0	2	PRB	11/30/19	1858	1941291	2
Uranium-238		3200	14.1	42.8	ug/kg	98.0	2					
Uranium-234	U	ND	2.14	10.7	ug/kg	98.0	2	PRB	12/02/19	1643	1941291	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.295	0.886	ug/kg	0.813	1	MXL2	11/22/19	2013	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,1,2-Trichloroethane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,1-Dichloroethane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,1-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2,3-Trichlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2,4-Trichlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2-Dibromo-3-chloropropane	U	ND	0.443	0.886	ug/kg	0.813	1					
1,2-Dibromoethane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2-Dichloroethane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,2-Dichloropropane	U	ND	0.295	0.886	ug/kg	0.813	1					
1,3-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,4-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
1,4-Dioxane	U	ND	1.48	4.43	ug/kg	0.813	1					
2-Butanone	U	ND	1.48	4.43	ug/kg	0.813	1					
2-Hexanone	U	ND	1.48	4.43	ug/kg	0.813	1					
4-Methyl-2-pentanone	U	ND	1.48	4.43	ug/kg	0.813	1					
Acetone	U	ND	1.48	4.43	ug/kg	0.813	1					
Benzene	U	ND	0.295	0.886	ug/kg	0.813	1					
Bromochloromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Bromodichloromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Bromoform	U	ND	0.295	0.886	ug/kg	0.813	1					
Bromomethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Carbon disulfide	U	ND	1.48	4.43	ug/kg	0.813	1					
Carbon tetrachloride	U	ND	0.295	0.886	ug/kg	0.813	1					
Chlorobenzene	U	ND	0.295	0.886	ug/kg	0.813	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-3	Project: WNUC01519
Sample ID: 497105003	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Chloroform	U	ND	0.295	0.886	ug/kg	0.813	1					
Chloromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Cyclohexane	U	ND	0.295	0.886	ug/kg	0.813	1					
Dibromochloromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Dichlorodifluoromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Ethylbenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
Isopropylbenzene	U	ND	0.295	0.886	ug/kg	0.813	1					
Methyl acetate	U	ND	1.48	4.43	ug/kg	0.813	1					
Methylcyclohexane	U	ND	0.295	0.886	ug/kg	0.813	1					
Methylene chloride	U	ND	1.48	4.43	ug/kg	0.813	1					
Styrene	U	ND	0.295	0.886	ug/kg	0.813	1					
Tetrachloroethylene	U	ND	0.295	0.886	ug/kg	0.813	1					
Toluene		1.29	0.295	0.886	ug/kg	0.813	1					
Trichloroethylene	U	ND	0.295	0.886	ug/kg	0.813	1					
Trichlorofluoromethane	U	ND	0.295	0.886	ug/kg	0.813	1					
Trichlorotrifluoroethane	U	ND	1.48	4.43	ug/kg	0.813	1					
Vinyl chloride	U	ND	0.295	0.886	ug/kg	0.813	1					
cis-1,2-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.813	1					
cis-1,3-Dichloropropylene	U	ND	0.295	0.886	ug/kg	0.813	1					
m,p-Xylenes	U	ND	0.591	1.77	ug/kg	0.813	1					
o-Xylene	U	ND	0.295	0.886	ug/kg	0.813	1					
tert-Butyl methyl ether	U	ND	0.295	0.886	ug/kg	0.813	1					
trans-1,2-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.813	1					
trans-1,3-Dichloropropylene	U	ND	0.295	0.886	ug/kg	0.813	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1403	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-3

Project: WNUC01519

Sample ID: 497105003

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.2 ug/kg	50.0	95	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.6 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.0 ug/kg	50.0	99	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-4 Project: WNUC01519
Sample ID: 497105004 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 12:16
Receive Date: 20-NOV-19
Collector: Client
Moisture: 10.8%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.24	0.356	1.05	mg/kg	9.35	1	LXA2	11/23/19	0511	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-238		11600	13.7	41.6	ug/kg	92.8	2	PRB	11/30/19	1859	1941291	2
Uranium-235		251	10.4	72.8	ug/kg	92.8	10	PRB	11/30/19	1940	1941291	3
Uranium-234	J	2.50	2.08	10.4	ug/kg	92.8	2	PRB	12/02/19	1645	1941291	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 3050B/6020B		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-18-5	Project:	WNUC01519
Sample ID:	497105005	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:19		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.90	0.370	1.09	mg/kg	9.66	1	LXA2	11/23/19	0541	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		46.2	2.22	15.5	ug/kg	98.6	2	PRB	11/30/19	1901	1941291	2
Uranium-238		2770	14.6	44.4	ug/kg	98.6	2					
Uranium-234	U	ND	2.22	11.1	ug/kg	98.6	2	PRB	12/02/19	1647	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-20-1	Project:	WNUC01519
Sample ID:	497105006	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:36		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	9.55%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.366	1.08	mg/kg	9.73	1	LXA2	11/23/19	0611	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		24.4	2.05	14.4	ug/kg	92.8	2	PRB	11/30/19	1903	1941291	2
Uranium-238		1540	13.5	41.0	ug/kg	92.8	2					
Uranium-234	U	ND	2.05	10.3	ug/kg	92.8	2	PRB	12/02/19	1649	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-20-2	Project:	WNUC01519
Sample ID:	497105007	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:39		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	6.42%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.352	1.03	mg/kg	9.69	1	LXA2	11/23/19	0740	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		19.3	1.96	13.7	ug/kg	91.7	2	PRB	11/30/19	1904	1941291	2
Uranium-238		1340	12.9	39.2	ug/kg	91.7	2					
Uranium-234	U	ND	1.96	9.80	ug/kg	91.7	2	PRB	12/02/19	1651	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-20-3	Project:	WNUC01519
Sample ID:	497105008	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:41		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	5.45%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.358	1.05	mg/kg	9.95	1	LXA2	11/23/19	0810	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		18.5	2.01	14.1	ug/kg	95.1	2	PRB	11/30/19	1910	1941291	2
Uranium-238		1430	13.3	40.2	ug/kg	95.1	2					
Uranium-234	U	ND	2.01	10.1	ug/kg	95.1	2	PRB	12/02/19	1653	1941291	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.303	0.909	ug/kg	0.859	1	MXL2	11/22/19	2039	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.303	0.909	ug/kg	0.859	1					
1,1,2-Trichloroethane	U	ND	0.303	0.909	ug/kg	0.859	1					
1,1-Dichloroethane	U	ND	0.303	0.909	ug/kg	0.859	1					
1,1-Dichloroethylene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,2,3-Trichlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,2,4-Trichlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,2-Dibromo-3-chloropropane	U	ND	0.454	0.909	ug/kg	0.859	1					
1,2-Dibromoethane	U	ND	0.303	0.909	ug/kg	0.859	1					
1,2-Dichlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,2-Dichloroethane	J	0.336	0.303	0.909	ug/kg	0.859	1					
1,2-Dichloropropane	U	ND	0.303	0.909	ug/kg	0.859	1					
1,3-Dichlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,4-Dichlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
1,4-Dioxane	U	ND	15.1	45.4	ug/kg	0.859	1					
2-Butanone	U	ND	1.51	4.54	ug/kg	0.859	1					
2-Hexanone	U	ND	1.51	4.54	ug/kg	0.859	1					
4-Methyl-2-pentanone	U	ND	1.51	4.54	ug/kg	0.859	1					
Acetone	U	ND	1.51	4.54	ug/kg	0.859	1					
Benzene	U	ND	0.303	0.909	ug/kg	0.859	1					
Bromochloromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Bromodichloromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Bromoform	U	ND	0.303	0.909	ug/kg	0.859	1					
Bromomethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Carbon disulfide	U	ND	1.51	4.54	ug/kg	0.859	1					
Carbon tetrachloride	U	ND	0.303	0.909	ug/kg	0.859	1					
Chlorobenzene	U	ND	0.303	0.909	ug/kg	0.859	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-3 Project: WNUC01519
Sample ID: 497105008 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Chloroform	U	ND	0.303	0.909	ug/kg	0.859	1					
Chloromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Cyclohexane	U	ND	0.303	0.909	ug/kg	0.859	1					
Dibromochloromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Dichlorodifluoromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Ethylbenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
Isopropylbenzene	U	ND	0.303	0.909	ug/kg	0.859	1					
Methyl acetate	U	ND	1.51	4.54	ug/kg	0.859	1					
Methylcyclohexane	U	ND	0.303	0.909	ug/kg	0.859	1					
Methylene chloride	U	ND	1.51	4.54	ug/kg	0.859	1					
Styrene	U	ND	0.303	0.909	ug/kg	0.859	1					
Tetrachloroethylene	J	0.327	0.303	0.909	ug/kg	0.859	1					
Toluene	J	0.309	0.303	0.909	ug/kg	0.859	1					
Trichloroethylene	U	ND	0.303	0.909	ug/kg	0.859	1					
Trichlorofluoromethane	U	ND	0.303	0.909	ug/kg	0.859	1					
Trichlorotrifluoroethane	U	ND	1.51	4.54	ug/kg	0.859	1					
Vinyl chloride	U	ND	0.303	0.909	ug/kg	0.859	1					
cis-1,2-Dichloroethylene	U	ND	0.303	0.909	ug/kg	0.859	1					
cis-1,3-Dichloropropylene	U	ND	0.303	0.909	ug/kg	0.859	1					
m,p-Xylenes	U	ND	0.606	1.82	ug/kg	0.859	1					
o-Xylene	U	ND	0.303	0.909	ug/kg	0.859	1					
tert-Butyl methyl ether	U	ND	0.303	0.909	ug/kg	0.859	1					
trans-1,2-Dichloroethylene	U	ND	0.303	0.909	ug/kg	0.859	1					
trans-1,3-Dichloropropylene	U	ND	0.303	0.909	ug/kg	0.859	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1404	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-3

Project: WNUC01519

Sample ID: 497105008

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.8 ug/kg	50.0	94	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.7 ug/kg	50.0	96	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.7 ug/kg	50.0	94	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-20-4	Project:	WNUC01519
Sample ID:	497105009	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:45		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.859	0.359	1.06	mg/kg	9.48	1	LXA2	11/23/19	0840	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		23.8	2.07	14.5	ug/kg	92.9	2	PRB	11/30/19	1911	1941291	2
Uranium-238		1660	13.7	41.4	ug/kg	92.9	2					
Uranium-234	U	ND	2.07	10.3	ug/kg	92.9	2	PRB	12/02/19	1655	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-20-5	Project:	WNUC01519
Sample ID:	497105010	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 12:50		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.46	0.367	1.08	mg/kg	9.71	1	LXA2	11/23/19	0910	1941739	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		41.6	2.09	14.6	ug/kg	94.0	2	PRB	11/30/19	1913	1941291	2
Uranium-238		2430	13.8	41.8	ug/kg	94.0	2					
Uranium-234	U	ND	2.09	10.5	ug/kg	94.0	2	PRB	12/02/19	1657	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	1520	1941737

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-1 Project: WNUC01519
Sample ID: 497105011 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 13:07
Receive Date: 20-NOV-19
Collector: Client
Moisture: 13.6%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.390	1.15	mg/kg	9.90	1	CH5	11/23/19	0111	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	14.5	2.16	15.1	ug/kg	93.5	2	PRB	11/30/19	1915	1941291	2
Uranium-238		1370	14.3	43.3	ug/kg	93.5	2					
Uranium-234	U	ND	2.16	10.8	ug/kg	93.5	2	PRB	12/02/19	1703	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-2 Project: WNUC01519
Sample ID: 497105012 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 13:10
Receive Date: 20-NOV-19
Collector: Client
Moisture: 13.6%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.484	0.397	1.17	mg/kg	10.1	1	CH5	11/23/19	0241	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	9.17	2.15	15.1	ug/kg	92.9	2	PRB	11/30/19	1916	1941291	2
Uranium-238		1120	14.2	43.0	ug/kg	92.9	2					
Uranium-234	U	ND	2.15	10.8	ug/kg	92.9	2	PRB	12/02/19	1705	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-3	Project: WNUC01519
Sample ID: 497105013	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:12	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.27	0.383	1.13	mg/kg	9.78	1	CH5	11/23/19	0310	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		17.7	2.16	15.1	ug/kg	93.6	2	PRB	11/30/19	1918	1941291	2
Uranium-238		1410	14.2	43.2	ug/kg	93.6	2					
Uranium-234	U	ND	2.16	10.8	ug/kg	93.6	2	PRB	12/02/19	1707	1941291	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.315	0.947	ug/kg	0.821	1	MXL2	11/22/19	2104	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,1,2-Trichloroethane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,1-Dichloroethane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,1-Dichloroethylene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2,3-Trichlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2,4-Trichlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2-Dibromo-3-chloropropane	U	ND	0.473	0.947	ug/kg	0.821	1					
1,2-Dibromoethane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2-Dichlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2-Dichloroethane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,2-Dichloropropane	U	ND	0.315	0.947	ug/kg	0.821	1					
1,3-Dichlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,4-Dichlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
1,4-Dioxane	U	ND	15.8	47.3	ug/kg	0.821	1					
2-Butanone	U	ND	1.58	4.73	ug/kg	0.821	1					
2-Hexanone	U	ND	1.58	4.73	ug/kg	0.821	1					
4-Methyl-2-pentanone	U	ND	1.58	4.73	ug/kg	0.821	1					
Acetone	U	ND	1.58	4.73	ug/kg	0.821	1					
Benzene	U	ND	0.315	0.947	ug/kg	0.821	1					
Bromochloromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Bromodichloromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Bromoform	U	ND	0.315	0.947	ug/kg	0.821	1					
Bromomethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Carbon disulfide	U	ND	1.58	4.73	ug/kg	0.821	1					
Carbon tetrachloride	U	ND	0.315	0.947	ug/kg	0.821	1					
Chlorobenzene	U	ND	0.315	0.947	ug/kg	0.821	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-3
Sample ID: 497105013

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Chloroform	U	ND	0.315	0.947	ug/kg	0.821	1					
Chloromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Cyclohexane	U	ND	0.315	0.947	ug/kg	0.821	1					
Dibromochloromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Dichlorodifluoromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Ethylbenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
Isopropylbenzene	U	ND	0.315	0.947	ug/kg	0.821	1					
Methyl acetate	U	ND	1.58	4.73	ug/kg	0.821	1					
Methylcyclohexane	U	ND	0.315	0.947	ug/kg	0.821	1					
Methylene chloride	U	ND	1.58	4.73	ug/kg	0.821	1					
Styrene	U	ND	0.315	0.947	ug/kg	0.821	1					
Tetrachloroethylene	U	ND	0.315	0.947	ug/kg	0.821	1					
Toluene		1.13	0.315	0.947	ug/kg	0.821	1					
Trichloroethylene	U	ND	0.315	0.947	ug/kg	0.821	1					
Trichlorofluoromethane	U	ND	0.315	0.947	ug/kg	0.821	1					
Trichlorotrifluoroethane	U	ND	1.58	4.73	ug/kg	0.821	1					
Vinyl chloride	U	ND	0.315	0.947	ug/kg	0.821	1					
cis-1,2-Dichloroethylene	U	ND	0.315	0.947	ug/kg	0.821	1					
cis-1,3-Dichloropropylene	U	ND	0.315	0.947	ug/kg	0.821	1					
m,p-Xylenes	U	ND	0.631	1.89	ug/kg	0.821	1					
o-Xylene	U	ND	0.315	0.947	ug/kg	0.821	1					
tert-Butyl methyl ether	U	ND	0.315	0.947	ug/kg	0.821	1					
trans-1,2-Dichloroethylene	U	ND	0.315	0.947	ug/kg	0.821	1					
trans-1,3-Dichloropropylene	U	ND	0.315	0.947	ug/kg	0.821	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1405	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-3
Sample ID: 497105013

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.5 ug/kg	50.0	98	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	49.4 ug/kg	50.0	104	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	47.5 ug/kg	50.0	100	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-25+26-4	Project:	WNUC01519
Sample ID:	497105014	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 13:15		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	9.98%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.374	1.10	mg/kg	9.90	1	CH5	11/23/19	0340	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	8.17	2.08	14.6	ug/kg	93.8	2	PRB	11/30/19	1920	1941291	2
Uranium-238		1060	13.8	41.7	ug/kg	93.8	2					
Uranium-234	U	ND	2.08	10.4	ug/kg	93.8	2	PRB	12/02/19	1709	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-5 Project: WNUC01519
Sample ID: 497105015 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 13:45
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.5%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.479	0.385	1.13	mg/kg	9.90	1	CH5	11/23/19	0410	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	11.2	2.27	15.9	ug/kg	99.4	2	PRB	11/30/19	1925	1941291	2
Uranium-238		1160	15.0	45.4	ug/kg	99.4	2					
Uranium-234	U	ND	2.27	11.4	ug/kg	99.4	2	PRB	12/02/19	1711	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-25+26-6	Project:	WNUC01519
Sample ID:	497105016	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 13:50		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.802	0.381	1.12	mg/kg	9.93	1	CH5	11/23/19	0440	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		15.1	2.15	15.0	ug/kg	95.1	2	PRB	11/30/19	1927	1941291	2
Uranium-238		1130	14.2	42.9	ug/kg	95.1	2					
Uranium-234	U	ND	2.15	10.7	ug/kg	95.1	2	PRB	12/02/19	1713	1941291	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.290	0.870	ug/kg	0.770	1	MXL2	11/22/19	2129	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,1,2-Trichloroethane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,1-Dichloroethane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,1-Dichloroethylene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2,3-Trichlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2,4-Trichlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2-Dibromo-3-chloropropane	U	ND	0.435	0.870	ug/kg	0.770	1					
1,2-Dibromoethane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2-Dichlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2-Dichloroethane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,2-Dichloropropane	U	ND	0.290	0.870	ug/kg	0.770	1					
1,3-Dichlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,4-Dichlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
1,4-Dioxane	U	ND	14.5	43.5	ug/kg	0.770	1					
2-Butanone	J	2.14	1.45	4.35	ug/kg	0.770	1					
2-Hexanone	U	ND	1.45	4.35	ug/kg	0.770	1					
4-Methyl-2-pentanone	U	ND	1.45	4.35	ug/kg	0.770	1					
Acetone		24.3	1.45	4.35	ug/kg	0.770	1					
Benzene	U	ND	0.290	0.870	ug/kg	0.770	1					
Bromochloromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Bromodichloromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Bromoform	U	ND	0.290	0.870	ug/kg	0.770	1					
Bromomethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Carbon disulfide	U	ND	1.45	4.35	ug/kg	0.770	1					
Carbon tetrachloride	U	ND	0.290	0.870	ug/kg	0.770	1					
Chlorobenzene	U	ND	0.290	0.870	ug/kg	0.770	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-6
Sample ID: 497105016

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Chloroform	U	ND	0.290	0.870	ug/kg	0.770	1					
Chloromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Cyclohexane	U	ND	0.290	0.870	ug/kg	0.770	1					
Dibromochloromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Dichlorodifluoromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Ethylbenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
Isopropylbenzene	U	ND	0.290	0.870	ug/kg	0.770	1					
Methyl acetate	U	ND	1.45	4.35	ug/kg	0.770	1					
Methylcyclohexane	U	ND	0.290	0.870	ug/kg	0.770	1					
Methylene chloride	U	ND	1.45	4.35	ug/kg	0.770	1					
Styrene	U	ND	0.290	0.870	ug/kg	0.770	1					
Tetrachloroethylene	U	ND	0.290	0.870	ug/kg	0.770	1					
Toluene		1.08	0.290	0.870	ug/kg	0.770	1					
Trichloroethylene	U	ND	0.290	0.870	ug/kg	0.770	1					
Trichlorofluoromethane	U	ND	0.290	0.870	ug/kg	0.770	1					
Trichlorotrifluoroethane	U	ND	1.45	4.35	ug/kg	0.770	1					
Vinyl chloride	U	ND	0.290	0.870	ug/kg	0.770	1					
cis-1,2-Dichloroethylene	U	ND	0.290	0.870	ug/kg	0.770	1					
cis-1,3-Dichloropropylene	U	ND	0.290	0.870	ug/kg	0.770	1					
m,p-Xylenes	U	ND	0.580	1.74	ug/kg	0.770	1					
o-Xylene	U	ND	0.290	0.870	ug/kg	0.770	1					
tert-Butyl methyl ether	U	ND	0.290	0.870	ug/kg	0.770	1					
trans-1,2-Dichloroethylene	U	ND	0.290	0.870	ug/kg	0.770	1					
trans-1,3-Dichloropropylene	U	ND	0.290	0.870	ug/kg	0.770	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1406	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-6
Sample ID: 497105016

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	40.0 ug/kg	50.0	92	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	41.5 ug/kg	50.0	95	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	41.1 ug/kg	50.0	94	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-7 Project: WNUC01519
Sample ID: 497105017 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 13:55
Receive Date: 20-NOV-19
Collector: Client
Moisture: 9.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.04	0.382	1.12	mg/kg	10.1	1	CH5	11/23/19	0609	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		17.8	2.13	14.9	ug/kg	96.2	2	PRB	11/30/19	1928	1941291	2
Uranium-238		1720	14.1	42.7	ug/kg	96.2	2					
Uranium-234	U	ND	2.13	10.7	ug/kg	96.2	2	PRB	12/02/19	1715	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-25+26-8	Project:	WNUC01519
Sample ID:	497105018	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:00		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	9.15%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.80	0.378	1.11	mg/kg	10.1	1	CH5	11/23/19	0639	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	10.7	2.03	14.2	ug/kg	92.4	2	PRB	11/30/19	1930	1941291	2
Uranium-238		1420	13.4	40.7	ug/kg	92.4	2					
Uranium-234	U	ND	2.03	10.2	ug/kg	92.4	2	PRB	12/02/19	1717	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-1	Project:	WNUC01519
Sample ID:	497105019	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:10		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.978	0.385	1.13	mg/kg	10.0	1	CH5	11/23/19	0709	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		46.9	2.09	14.6	ug/kg	92.4	2	PRB	11/30/19	1932	1941291	2
Uranium-238		2890	13.8	41.8	ug/kg	92.4	2					
Uranium-234	U	ND	2.09	10.5	ug/kg	92.4	2	PRB	12/02/19	1719	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-2	Project:	WNUC01519
Sample ID:	497105020	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:15		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	16.5%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.03	0.397	1.17	mg/kg	9.76	1	CH5	11/23/19	0739	1941873	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		18.0	2.26	15.8	ug/kg	94.2	2	PRB	11/30/19	1933	1941291	2
Uranium-238		1500	14.9	45.1	ug/kg	94.2	2					
Uranium-234	U	ND	2.26	11.3	ug/kg	94.2	2	PRB	12/02/19	1721	1941291	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941290
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	11/22/19	2006	1941870

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-3	Project: WNUC01519
Sample ID: 497105021	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:18	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 16.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.890	0.414	1.22	mg/kg	10.2	1	LXA2	11/23/19	0121	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		139	2.29	16.0	ug/kg	95.6	2	PRB	11/30/19	1613	1941293	2
Uranium-238		6310	15.1	45.7	ug/kg	95.6	2					
Uranium-234	U	ND	2.29	11.4	ug/kg	95.6	2	PRB	12/02/19	1420	1941293	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.301	0.903	ug/kg	0.755	1	MXL2	11/22/19	2155	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,1,2-Trichloroethane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,1-Dichloroethane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,1-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2,3-Trichlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2,4-Trichlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2-Dibromo-3-chloropropane	U	ND	0.452	0.903	ug/kg	0.755	1					
1,2-Dibromoethane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2-Dichloroethane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,2-Dichloropropane	U	ND	0.301	0.903	ug/kg	0.755	1					
1,3-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,4-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
1,4-Dioxane	U	ND	15.1	45.2	ug/kg	0.755	1					
2-Butanone	U	ND	1.51	4.52	ug/kg	0.755	1					
2-Hexanone	U	ND	1.51	4.52	ug/kg	0.755	1					
4-Methyl-2-pentanone	U	ND	1.51	4.52	ug/kg	0.755	1					
Acetone	U	ND	1.51	4.52	ug/kg	0.755	1					
Benzene	U	ND	0.301	0.903	ug/kg	0.755	1					
Bromochloromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Bromodichloromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Bromoform	U	ND	0.301	0.903	ug/kg	0.755	1					
Bromomethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Carbon disulfide	U	ND	1.51	4.52	ug/kg	0.755	1					
Carbon tetrachloride	U	ND	0.301	0.903	ug/kg	0.755	1					
Chlorobenzene	U	ND	0.301	0.903	ug/kg	0.755	1					

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-3 Project: WNUC01519
Sample ID: 497105021 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Chloroform	U	ND	0.301	0.903	ug/kg	0.755	1					
Chloromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Cyclohexane	U	ND	0.301	0.903	ug/kg	0.755	1					
Dibromochloromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Dichlorodifluoromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Ethylbenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
Isopropylbenzene	U	ND	0.301	0.903	ug/kg	0.755	1					
Methyl acetate	U	ND	1.51	4.52	ug/kg	0.755	1					
Methylcyclohexane	U	ND	0.301	0.903	ug/kg	0.755	1					
Methylene chloride	U	ND	1.51	4.52	ug/kg	0.755	1					
Styrene	U	ND	0.301	0.903	ug/kg	0.755	1					
Tetrachloroethylene	J	0.569	0.301	0.903	ug/kg	0.755	1					
Toluene	U	ND	0.301	0.903	ug/kg	0.755	1					
Trichloroethylene	U	ND	0.301	0.903	ug/kg	0.755	1					
Trichlorofluoromethane	U	ND	0.301	0.903	ug/kg	0.755	1					
Trichlorotrifluoroethane	U	ND	1.51	4.52	ug/kg	0.755	1					
Vinyl chloride	U	ND	0.301	0.903	ug/kg	0.755	1					
cis-1,2-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.755	1					
cis-1,3-Dichloropropylene	U	ND	0.301	0.903	ug/kg	0.755	1					
m,p-Xylenes	U	ND	0.602	1.81	ug/kg	0.755	1					
o-Xylene	U	ND	0.301	0.903	ug/kg	0.755	1					
tert-Butyl methyl ether	U	ND	0.301	0.903	ug/kg	0.755	1					
trans-1,2-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.755	1					
trans-1,3-Dichloropropylene	U	ND	0.301	0.903	ug/kg	0.755	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1407	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-3

Project: WNUC01519

Sample ID: 497105021

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	
4	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.8 ug/kg	50.0	95	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	49.4 ug/kg	50.0	109	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.0 ug/kg	50.0	100	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-4	Project:	WNUC01519
Sample ID:	497105022	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:20		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.79	0.388	1.14	mg/kg	10.3	1	LXA2	11/23/19	0251	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		91.5	2.07	14.5	ug/kg	92.8	2	PRB	11/30/19	1625	1941293	2
Uranium-238		4030	13.6	41.3	ug/kg	92.8	2					
Uranium-234	U	ND	2.07	10.3	ug/kg	92.8	2	PRB	12/02/19	1432	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-5	Project:	WNUC01519
Sample ID:	497105023	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:24		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.10	0.385	1.13	mg/kg	10.0	1	LXA2	11/23/19	0320	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		105	2.23	15.6	ug/kg	98.6	2	PRB	11/30/19	1627	1941293	2
Uranium-238		4850	14.7	44.7	ug/kg	98.6	2					
Uranium-234	U	ND	2.23	11.2	ug/kg	98.6	2	PRB	12/02/19	1434	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-46-1	Project:	WNUC01519
Sample ID:	497105024	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:50		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.792	0.392	1.15	mg/kg	10.2	1	LXA2	11/23/19	0350	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	9.98	2.07	14.5	ug/kg	92.1	2	PRB	11/30/19	1629	1941293	2
Uranium-238		1280	13.7	41.5	ug/kg	92.1	2					
Uranium-234	U	ND	2.07	10.4	ug/kg	92.1	2	PRB	12/02/19	1436	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-46-2	Project:	WNUC01519
Sample ID:	497105025	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:53		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.364	1.07	mg/kg	9.57	1	LXA2	11/23/19	0420	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	8.15	2.11	14.7	ug/kg	94.2	2	PRB	11/30/19	1631	1941293	2
Uranium-238		1020	13.9	42.1	ug/kg	94.2	2					
Uranium-234	U	ND	2.11	10.5	ug/kg	94.2	2	PRB	12/02/19	1438	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-46-3	Project:	WNUC01519
Sample ID:	497105026	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:00		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	12.9%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.933	0.373	1.10	mg/kg	9.55	1	LXA2	11/23/19	0450	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	11.1	2.09	14.6	ug/kg	90.9	2	PRB	11/30/19	1632	1941293	2
Uranium-238		1120	13.8	41.8	ug/kg	90.9	2					
Uranium-234	U	ND	2.09	10.4	ug/kg	90.9	2	PRB	12/02/19	1440	1941293	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.295	0.886	ug/kg	0.772	1	MXL2	11/22/19	2221	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.295	0.886	ug/kg	0.772	1					
1,1,2-Trichloroethane	U	ND	0.295	0.886	ug/kg	0.772	1					
1,1-Dichloroethane	U	ND	0.295	0.886	ug/kg	0.772	1					
1,1-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,2,3-Trichlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,2,4-Trichlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,2-Dibromo-3-chloropropane	U	ND	0.443	0.886	ug/kg	0.772	1					
1,2-Dibromoethane	U	ND	0.295	0.886	ug/kg	0.772	1					
1,2-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,2-Dichloroethane	J	0.372	0.295	0.886	ug/kg	0.772	1					
1,2-Dichloropropane	U	ND	0.295	0.886	ug/kg	0.772	1					
1,3-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,4-Dichlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
1,4-Dioxane	U	ND	1.48	4.43	ug/kg	0.772	1					
2-Butanone	U	ND	1.48	4.43	ug/kg	0.772	1					
2-Hexanone	U	ND	1.48	4.43	ug/kg	0.772	1					
4-Methyl-2-pentanone	U	ND	1.48	4.43	ug/kg	0.772	1					
Acetone	U	ND	1.48	4.43	ug/kg	0.772	1					
Benzene	U	ND	0.295	0.886	ug/kg	0.772	1					
Bromochloromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Bromodichloromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Bromoform	U	ND	0.295	0.886	ug/kg	0.772	1					
Bromomethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Carbon disulfide	U	ND	1.48	4.43	ug/kg	0.772	1					
Carbon tetrachloride	U	ND	0.295	0.886	ug/kg	0.772	1					
Chlorobenzene	U	ND	0.295	0.886	ug/kg	0.772	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-3	Project: WNUC01519
Sample ID: 497105026	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Chloroform	U	ND	0.295	0.886	ug/kg	0.772	1					
Chloromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Cyclohexane	U	ND	0.295	0.886	ug/kg	0.772	1					
Dibromochloromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Dichlorodifluoromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Ethylbenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
Isopropylbenzene	U	ND	0.295	0.886	ug/kg	0.772	1					
Methyl acetate	U	ND	1.48	4.43	ug/kg	0.772	1					
Methylcyclohexane	U	ND	0.295	0.886	ug/kg	0.772	1					
Methylene chloride	U	ND	1.48	4.43	ug/kg	0.772	1					
Styrene	U	ND	0.295	0.886	ug/kg	0.772	1					
Tetrachloroethylene	U	ND	0.295	0.886	ug/kg	0.772	1					
Toluene	U	ND	0.295	0.886	ug/kg	0.772	1					
Trichloroethylene	U	ND	0.295	0.886	ug/kg	0.772	1					
Trichlorofluoromethane	U	ND	0.295	0.886	ug/kg	0.772	1					
Trichlorotrifluoroethane	U	ND	1.48	4.43	ug/kg	0.772	1					
Vinyl chloride	U	ND	0.295	0.886	ug/kg	0.772	1					
cis-1,2-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.772	1					
cis-1,3-Dichloropropylene	U	ND	0.295	0.886	ug/kg	0.772	1					
m,p-Xylenes	U	ND	0.591	1.77	ug/kg	0.772	1					
o-Xylene	U	ND	0.295	0.886	ug/kg	0.772	1					
tert-Butyl methyl ether	J	0.461	0.295	0.886	ug/kg	0.772	1					
trans-1,2-Dichloroethylene	U	ND	0.295	0.886	ug/kg	0.772	1					
trans-1,3-Dichloropropylene	U	ND	0.295	0.886	ug/kg	0.772	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1408	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205
Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-3 Project: WNUC01519
Sample ID: 497105026 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.2 ug/kg	50.0	95	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.5 ug/kg	50.0	103	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.8 ug/kg	50.0	99	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-46-4	Project:	WNUC01519
Sample ID:	497105027	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:04		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	13.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.13	0.385	1.13	mg/kg	9.80	1	LXA2	11/23/19	0620	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	10.3	2.29	16.0	ug/kg	99.2	2	PRB	11/30/19	1634	1941293	2
Uranium-238		1110	15.1	45.8	ug/kg	99.2	2					
Uranium-234	U	ND	2.29	11.5	ug/kg	99.2	2	PRB	12/02/19	1442	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-46-5	Project:	WNUC01519
Sample ID:	497105028	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:09		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	12.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.70	0.378	1.11	mg/kg	9.78	1	LXA2	11/23/19	0649	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	13.9	2.07	14.5	ug/kg	90.9	2	PRB	11/30/19	1639	1941293	2
Uranium-238		1320	13.6	41.4	ug/kg	90.9	2					
Uranium-234	U	ND	2.07	10.3	ug/kg	90.9	2	PRB	12/02/19	1444	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-35-1	Project:	WNUC01519
Sample ID:	497105029	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:07		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	15%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.411	1.21	mg/kg	10.3	1	LXA2	11/23/19	0719	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		18.1	2.20	15.4	ug/kg	93.6	2	PRB	11/30/19	1641	1941293	2
Uranium-238		1490	14.5	44.0	ug/kg	93.6	2					
Uranium-234	U	ND	2.20	11.0	ug/kg	93.6	2	PRB	12/02/19	1450	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-35-2	Project:	WNUC01519
Sample ID:	497105030	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:13		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	14%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.395	1.16	mg/kg	10.0	1	LXA2	11/23/19	0749	1941879	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		17.1	2.26	15.8	ug/kg	97.3	2	PRB	11/30/19	1642	1941293	2
Uranium-238		1420	14.9	45.2	ug/kg	97.3	2					
Uranium-234	U	ND	2.26	11.3	ug/kg	97.3	2	PRB	12/02/19	1452	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2215	1941877

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-35-3	Project:	WNUC01519
Sample ID:	497105031	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:18		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	12%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.59	0.381	1.12	mg/kg	9.88	1	CH5	11/23/19	1008	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		16.0	2.26	15.8	ug/kg	99.4	2	PRB	11/30/19	1644	1941293	2
Uranium-238		1340	14.9	45.2	ug/kg	99.4	2					
Uranium-234	U	ND	2.26	11.3	ug/kg	99.4	2	PRB	12/02/19	1454	1941293	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.279	0.838	ug/kg	0.737	1	MXL2	11/22/19	2247	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,1,2-Trichloroethane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,1-Dichloroethane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,1-Dichloroethylene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2,3-Trichlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2,4-Trichlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2-Dibromo-3-chloropropane	U	ND	0.419	0.838	ug/kg	0.737	1					
1,2-Dibromoethane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2-Dichlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2-Dichloroethane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,2-Dichloropropane	U	ND	0.279	0.838	ug/kg	0.737	1					
1,3-Dichlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,4-Dichlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
1,4-Dioxane	U	ND	14.0	41.9	ug/kg	0.737	1					
2-Butanone	U	ND	1.40	4.19	ug/kg	0.737	1					
2-Hexanone	U	ND	1.40	4.19	ug/kg	0.737	1					
4-Methyl-2-pentanone	U	ND	1.40	4.19	ug/kg	0.737	1					
Acetone	U	ND	1.40	4.19	ug/kg	0.737	1					
Benzene	U	ND	0.279	0.838	ug/kg	0.737	1					
Bromochloromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Bromodichloromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Bromoform	U	ND	0.279	0.838	ug/kg	0.737	1					
Bromomethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Carbon disulfide	U	ND	1.40	4.19	ug/kg	0.737	1					
Carbon tetrachloride	U	ND	0.279	0.838	ug/kg	0.737	1					
Chlorobenzene	U	ND	0.279	0.838	ug/kg	0.737	1					

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-3	Project: WNUC01519
Sample ID: 497105031	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Chloroform	U	ND	0.279	0.838	ug/kg	0.737	1					
Chloromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Cyclohexane	U	ND	0.279	0.838	ug/kg	0.737	1					
Dibromochloromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Dichlorodifluoromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Ethylbenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
Isopropylbenzene	U	ND	0.279	0.838	ug/kg	0.737	1					
Methyl acetate	U	ND	1.40	4.19	ug/kg	0.737	1					
Methylcyclohexane	U	ND	0.279	0.838	ug/kg	0.737	1					
Methylene chloride	U	ND	1.40	4.19	ug/kg	0.737	1					
Styrene	U	ND	0.279	0.838	ug/kg	0.737	1					
Tetrachloroethylene	U	ND	0.279	0.838	ug/kg	0.737	1					
Toluene	U	ND	0.279	0.838	ug/kg	0.737	1					
Trichloroethylene	U	ND	0.279	0.838	ug/kg	0.737	1					
Trichlorofluoromethane	U	ND	0.279	0.838	ug/kg	0.737	1					
Trichlorotrifluoroethane	U	ND	1.40	4.19	ug/kg	0.737	1					
Vinyl chloride	U	ND	0.279	0.838	ug/kg	0.737	1					
cis-1,2-Dichloroethylene	U	ND	0.279	0.838	ug/kg	0.737	1					
cis-1,3-Dichloropropylene	U	ND	0.279	0.838	ug/kg	0.737	1					
m,p-Xylenes	U	ND	0.559	1.68	ug/kg	0.737	1					
o-Xylene	U	ND	0.279	0.838	ug/kg	0.737	1					
tert-Butyl methyl ether	J	0.310	0.279	0.838	ug/kg	0.737	1					
trans-1,2-Dichloroethylene	U	ND	0.279	0.838	ug/kg	0.737	1					
trans-1,3-Dichloropropylene	U	ND	0.279	0.838	ug/kg	0.737	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/22/19	1409	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-3

Project: WNUC01519

Sample ID: 497105031

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	39.5 ug/kg	50.0	94	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.2 ug/kg	50.0	103	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	40.3 ug/kg	50.0	96	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-35-4	Project:	WNUC01519
Sample ID:	497105032	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:25		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	9.22%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.73	0.370	1.09	mg/kg	9.88	1	CH5	11/23/19	1138	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		28.2	2.06	14.4	ug/kg	93.6	2	PRB	11/30/19	1646	1941293	2
Uranium-238		2800	13.6	41.3	ug/kg	93.6	2					
Uranium-234	U	ND	2.06	10.3	ug/kg	93.6	2	PRB	12/02/19	1456	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-35-5	Project:	WNUC01519
Sample ID:	497105033	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:31		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.373	1.10	mg/kg	9.85	1	CH5	11/23/19	1207	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	15.0	2.14	15.0	ug/kg	96.3	2	PRB	11/30/19	1648	1941293	2
Uranium-238		1170	14.1	42.9	ug/kg	96.3	2					
Uranium-234	U	ND	2.14	10.7	ug/kg	96.3	2	PRB	12/02/19	1458	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-6 Project: WNUC01519
Sample ID: 497105034 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:36
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.6%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.37	0.383	1.13	mg/kg	9.85	1	CH5	11/23/19	1237	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	13.3	2.22	15.5	ug/kg	96.9	2	PRB	11/30/19	1649	1941293	2
Uranium-238		1120	14.6	44.4	ug/kg	96.9	2					
Uranium-234	U	ND	2.22	11.1	ug/kg	96.9	2	PRB	12/02/19	1500	1941293	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.292	0.876	ug/kg	0.766	1	MXL2	11/24/19	1522	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,1,2-Trichloroethane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,1-Dichloroethane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,1-Dichloroethylene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2,3-Trichlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2,4-Trichlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2-Dibromo-3-chloropropane	U	ND	0.438	0.876	ug/kg	0.766	1					
1,2-Dibromoethane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2-Dichlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2-Dichloroethane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,2-Dichloropropane	U	ND	0.292	0.876	ug/kg	0.766	1					
1,3-Dichlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,4-Dichlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
1,4-Dioxane	U	ND	14.6	43.8	ug/kg	0.766	1					
2-Butanone	U	ND	1.46	4.38	ug/kg	0.766	1					
2-Hexanone	U	ND	1.46	4.38	ug/kg	0.766	1					
4-Methyl-2-pentanone	U	ND	1.46	4.38	ug/kg	0.766	1					
Acetone	U	ND	1.46	4.38	ug/kg	0.766	1					
Benzene	U	ND	0.292	0.876	ug/kg	0.766	1					
Bromochloromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Bromodichloromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Bromoform	U	ND	0.292	0.876	ug/kg	0.766	1					
Bromomethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Carbon disulfide	U	ND	1.46	4.38	ug/kg	0.766	1					
Carbon tetrachloride	U	ND	0.292	0.876	ug/kg	0.766	1					
Chlorobenzene	U	ND	0.292	0.876	ug/kg	0.766	1					

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-6	Project: WNUC01519
Sample ID: 497105034	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Chloroform	U	ND	0.292	0.876	ug/kg	0.766	1					
Chloromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Cyclohexane	U	ND	0.292	0.876	ug/kg	0.766	1					
Dibromochloromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Dichlorodifluoromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Ethylbenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
Isopropylbenzene	U	ND	0.292	0.876	ug/kg	0.766	1					
Methyl acetate	U	ND	1.46	4.38	ug/kg	0.766	1					
Methylcyclohexane	U	ND	0.292	0.876	ug/kg	0.766	1					
Methylene chloride	U	ND	1.46	4.38	ug/kg	0.766	1					
Styrene	U	ND	0.292	0.876	ug/kg	0.766	1					
Tetrachloroethylene	U	ND	0.292	0.876	ug/kg	0.766	1					
Toluene	U	ND	0.292	0.876	ug/kg	0.766	1					
Trichloroethylene	U	ND	0.292	0.876	ug/kg	0.766	1					
Trichlorofluoromethane	U	ND	0.292	0.876	ug/kg	0.766	1					
Trichlorotrifluoroethane	U	ND	1.46	4.38	ug/kg	0.766	1					
Vinyl chloride	U	ND	0.292	0.876	ug/kg	0.766	1					
cis-1,2-Dichloroethylene	U	ND	0.292	0.876	ug/kg	0.766	1					
cis-1,3-Dichloropropylene	U	ND	0.292	0.876	ug/kg	0.766	1					
m,p-Xylenes	U	ND	0.584	1.75	ug/kg	0.766	1					
o-Xylene	U	ND	0.292	0.876	ug/kg	0.766	1					
tert-Butyl methyl ether	U	ND	0.292	0.876	ug/kg	0.766	1					
trans-1,2-Dichloroethylene	U	ND	0.292	0.876	ug/kg	0.766	1					
trans-1,3-Dichloropropylene	U	ND	0.292	0.876	ug/kg	0.766	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1315	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-6 Project: WNUC01519
Sample ID: 497105034 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.2 ug/kg	50.0	103	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	50.8 ug/kg	50.0	116	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	47.7 ug/kg	50.0	109	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-44-1	Project:	WNUC01519
Sample ID:	497105035	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:30		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.581	0.376	1.10	mg/kg	9.85	1	CH5	11/23/19	1307	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		79.8	2.17	15.2	ug/kg	96.9	2	PRB	11/30/19	1716	1941293	2
Uranium-238		3240	14.3	43.5	ug/kg	96.9	2					
Uranium-234	U	ND	2.17	10.9	ug/kg	96.9	2	PRB	12/02/19	1502	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-44-2	Project:	WNUC01519
Sample ID:	497105036	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:34		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	12.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.386	1.14	mg/kg	9.95	1	JLD1	11/23/19	0113	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		58.8	2.14	15.0	ug/kg	94.0	2	PRB	11/30/19	1718	1941293	2
Uranium-238		2550	14.2	42.9	ug/kg	94.0	2					
Uranium-234	U	ND	2.14	10.7	ug/kg	94.0	2	PRB	12/02/19	1508	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-3 Project: WNUC01519
Sample ID: 497105037 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:37
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.4%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.707	0.380	1.12	mg/kg	9.90	1	JLD1	11/23/19	0243	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	10.6	2.14	15.0	ug/kg	94.7	2	PRB	11/30/19	1719	1941293	2
Uranium-238		951	14.1	42.7	ug/kg	94.7	2					
Uranium-234	U	ND	2.14	10.7	ug/kg	94.7	2	PRB	12/02/19	1510	1941293	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.286	0.860	ug/kg	0.762	1	MXL2	11/24/19	1548	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,1,2-Trichloroethane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,1-Dichloroethane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,1-Dichloroethylene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2,3-Trichlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2,4-Trichlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2-Dibromo-3-chloropropane	U	ND	0.430	0.860	ug/kg	0.762	1					
1,2-Dibromoethane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2-Dichlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2-Dichloroethane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,2-Dichloropropane	U	ND	0.286	0.860	ug/kg	0.762	1					
1,3-Dichlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,4-Dichlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
1,4-Dioxane	U	ND	14.3	43.0	ug/kg	0.762	1					
2-Butanone	U	ND	1.43	4.30	ug/kg	0.762	1					
2-Hexanone	U	ND	1.43	4.30	ug/kg	0.762	1					
4-Methyl-2-pentanone	U	ND	1.43	4.30	ug/kg	0.762	1					
Acetone	U	ND	1.43	4.30	ug/kg	0.762	1					
Benzene	U	ND	0.286	0.860	ug/kg	0.762	1					
Bromochloromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Bromodichloromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Bromoform	U	ND	0.286	0.860	ug/kg	0.762	1					
Bromomethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Carbon disulfide	U	ND	1.43	4.30	ug/kg	0.762	1					
Carbon tetrachloride	U	ND	0.286	0.860	ug/kg	0.762	1					
Chlorobenzene	U	ND	0.286	0.860	ug/kg	0.762	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-3	Project: WNUC01519
Sample ID: 497105037	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Chloroform	U	ND	0.286	0.860	ug/kg	0.762	1					
Chloromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Cyclohexane	U	ND	0.286	0.860	ug/kg	0.762	1					
Dibromochloromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Dichlorodifluoromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Ethylbenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
Isopropylbenzene	U	ND	0.286	0.860	ug/kg	0.762	1					
Methyl acetate	U	ND	1.43	4.30	ug/kg	0.762	1					
Methylcyclohexane	U	ND	0.286	0.860	ug/kg	0.762	1					
Methylene chloride	U	ND	1.43	4.30	ug/kg	0.762	1					
Styrene	U	ND	0.286	0.860	ug/kg	0.762	1					
Tetrachloroethylene	U	ND	0.286	0.860	ug/kg	0.762	1					
Toluene	U	ND	0.286	0.860	ug/kg	0.762	1					
Trichloroethylene	U	ND	0.286	0.860	ug/kg	0.762	1					
Trichlorofluoromethane	U	ND	0.286	0.860	ug/kg	0.762	1					
Trichlorotrifluoroethane	U	ND	1.43	4.30	ug/kg	0.762	1					
Vinyl chloride	U	ND	0.286	0.860	ug/kg	0.762	1					
cis-1,2-Dichloroethylene	U	ND	0.286	0.860	ug/kg	0.762	1					
cis-1,3-Dichloropropylene	U	ND	0.286	0.860	ug/kg	0.762	1					
m,p-Xylenes	U	ND	0.574	1.72	ug/kg	0.762	1					
o-Xylene	U	ND	0.286	0.860	ug/kg	0.762	1					
tert-Butyl methyl ether	U	ND	0.286	0.860	ug/kg	0.762	1					
trans-1,2-Dichloroethylene	U	ND	0.286	0.860	ug/kg	0.762	1					
trans-1,3-Dichloropropylene	U	ND	0.286	0.860	ug/kg	0.762	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1316	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-3

Project: WNUC01519

Sample ID: 497105037

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	
4	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.0 ug/kg	50.0	107	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.5 ug/kg	50.0	108	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.0 ug/kg	50.0	105	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-44-4	Project:	WNUC01519
Sample ID:	497105038	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 15:42		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.725	0.386	1.13	mg/kg	10.0	1	JLD1	11/23/19	0313	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		78.3	2.22	15.5	ug/kg	98.0	2	PRB	11/30/19	1721	1941293	2
Uranium-238		3660	14.6	44.4	ug/kg	98.0	2					
Uranium-234	U	ND	2.22	11.1	ug/kg	98.0	2	PRB	12/02/19	1512	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-5 Project: WNUC01519
Sample ID: 497105039 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:45
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.3%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.728	0.382	1.12	mg/kg	9.85	1	JLD1	11/23/19	0343	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		133	2.24	15.7	ug/kg	98.4	2	PRB	11/30/19	1723	1941293	2
Uranium-238		4410	14.8	44.9	ug/kg	98.4	2					
Uranium-234	U	ND	2.24	11.2	ug/kg	98.4	2	PRB	12/02/19	1514	1941293	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-6 Project: WNUC01519
Sample ID: 497105040 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:49
Receive Date: 20-NOV-19
Collector: Client
Moisture: 13.6%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.92	0.390	1.15	mg/kg	9.90	1	JLD1	11/23/19	0412	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-238		40900	150	456	ug/kg	98.4	20	PRB	11/30/19	1724	1941293	2
Uranium-235		1630	45.6	319	ug/kg	98.4	40	PRB	11/30/19	1728	1941293	3
Uranium-234		16.9	2.28	11.4	ug/kg	98.4	2	PRB	12/02/19	1516	1941293	4
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.294	0.884	ug/kg	0.763	1	MXL2	11/24/19	1614	1942304	5
1,1,2,2-Tetrachloroethane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,1,2-Trichloroethane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,1-Dichloroethane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,1-Dichloroethylene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2,3-Trichlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2,4-Trichlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2-Dibromo-3-chloropropane	U	ND	0.442	0.884	ug/kg	0.763	1					
1,2-Dibromoethane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2-Dichlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2-Dichloroethane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,2-Dichloropropane	U	ND	0.294	0.884	ug/kg	0.763	1					
1,3-Dichlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,4-Dichlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
1,4-Dioxane	U	ND	14.7	44.2	ug/kg	0.763	1					
2-Butanone	U	ND	1.47	4.42	ug/kg	0.763	1					
2-Hexanone	U	ND	1.47	4.42	ug/kg	0.763	1					
4-Methyl-2-pentanone	U	ND	1.47	4.42	ug/kg	0.763	1					
Acetone	U	ND	1.47	4.42	ug/kg	0.763	1					
Benzene	U	ND	0.294	0.884	ug/kg	0.763	1					
Bromochloromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Bromodichloromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Bromoform	U	ND	0.294	0.884	ug/kg	0.763	1					
Bromomethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Carbon disulfide	U	ND	1.47	4.42	ug/kg	0.763	1					
Carbon tetrachloride	U	ND	0.294	0.884	ug/kg	0.763	1					
Chlorobenzene	U	ND	0.294	0.884	ug/kg	0.763	1					

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-6	Project: WNUC01519
Sample ID: 497105040	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Chloroform	U	ND	0.294	0.884	ug/kg	0.763	1					
Chloromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Cyclohexane	U	ND	0.294	0.884	ug/kg	0.763	1					
Dibromochloromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Dichlorodifluoromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Ethylbenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
Isopropylbenzene	U	ND	0.294	0.884	ug/kg	0.763	1					
Methyl acetate	U	ND	1.47	4.42	ug/kg	0.763	1					
Methylcyclohexane	U	ND	0.294	0.884	ug/kg	0.763	1					
Methylene chloride	U	ND	1.47	4.42	ug/kg	0.763	1					
Styrene	U	ND	0.294	0.884	ug/kg	0.763	1					
Tetrachloroethylene	U	ND	0.294	0.884	ug/kg	0.763	1					
Toluene	U	ND	0.294	0.884	ug/kg	0.763	1					
Trichloroethylene	U	ND	0.294	0.884	ug/kg	0.763	1					
Trichlorofluoromethane	U	ND	0.294	0.884	ug/kg	0.763	1					
Trichlorotrifluoroethane	U	ND	1.47	4.42	ug/kg	0.763	1					
Vinyl chloride	U	ND	0.294	0.884	ug/kg	0.763	1					
cis-1,2-Dichloroethylene	U	ND	0.294	0.884	ug/kg	0.763	1					
cis-1,3-Dichloropropylene	U	ND	0.294	0.884	ug/kg	0.763	1					
m,p-Xylenes	U	ND	0.589	1.77	ug/kg	0.763	1					
o-Xylene	U	ND	0.294	0.884	ug/kg	0.763	1					
tert-Butyl methyl ether	U	ND	0.294	0.884	ug/kg	0.763	1					
trans-1,2-Dichloroethylene	U	ND	0.294	0.884	ug/kg	0.763	1					
trans-1,3-Dichloropropylene	U	ND	0.294	0.884	ug/kg	0.763	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941292
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1317	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-6

Project: WNUC01519

Sample ID: 497105040

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	
4	SW846 3050B/6020B	
5	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.6 ug/kg	50.0	103	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	48.3 ug/kg	50.0	109	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.8 ug/kg	50.0	106	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-1	Project: WNUC01519
Sample ID: 497105041	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 08:45	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.380	1.12	mg/kg	9.90	1	JLD1	11/23/19	0442	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	12.4	2.06	14.4	ug/kg	91.1	2	PRB	11/30/19	1738	1941295	2
Uranium-238		1080	13.6	41.1	ug/kg	91.1	2					
Uranium-234	U	ND	2.06	10.3	ug/kg	91.1	2	PRB	12/02/19	1526	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.300	0.900	ug/kg	0.797	1	MXL2	11/24/19	1640	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,1,2-Trichloroethane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,1-Dichloroethane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,1-Dichloroethylene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2,3-Trichlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2,4-Trichlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2-Dibromo-3-chloropropane	U	ND	0.450	0.900	ug/kg	0.797	1					
1,2-Dibromoethane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2-Dichlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2-Dichloroethane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,2-Dichloropropane	U	ND	0.300	0.900	ug/kg	0.797	1					
1,3-Dichlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,4-Dichlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
1,4-Dioxane	U	ND	15.0	45.0	ug/kg	0.797	1					
2-Butanone	U	ND	1.50	4.50	ug/kg	0.797	1					
2-Hexanone	U	ND	1.50	4.50	ug/kg	0.797	1					
4-Methyl-2-pentanone	U	ND	1.50	4.50	ug/kg	0.797	1					
Acetone	J	3.54	1.50	4.50	ug/kg	0.797	1					
Benzene	U	ND	0.300	0.900	ug/kg	0.797	1					
Bromochloromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Bromodichloromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Bromoform	U	ND	0.300	0.900	ug/kg	0.797	1					
Bromomethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Carbon disulfide	U	ND	1.50	4.50	ug/kg	0.797	1					
Carbon tetrachloride	U	ND	0.300	0.900	ug/kg	0.797	1					
Chlorobenzene	U	ND	0.300	0.900	ug/kg	0.797	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-1	Project: WNUC01519
Sample ID: 497105041	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Chloroform	U	ND	0.300	0.900	ug/kg	0.797	1					
Chloromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Cyclohexane	U	ND	0.300	0.900	ug/kg	0.797	1					
Dibromochloromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Dichlorodifluoromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Ethylbenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
Isopropylbenzene	U	ND	0.300	0.900	ug/kg	0.797	1					
Methyl acetate	U	ND	1.50	4.50	ug/kg	0.797	1					
Methylcyclohexane	U	ND	0.300	0.900	ug/kg	0.797	1					
Methylene chloride	U	ND	1.50	4.50	ug/kg	0.797	1					
Styrene	U	ND	0.300	0.900	ug/kg	0.797	1					
Tetrachloroethylene	U	ND	0.300	0.900	ug/kg	0.797	1					
Toluene	J	0.657	0.300	0.900	ug/kg	0.797	1					
Trichloroethylene	U	ND	0.300	0.900	ug/kg	0.797	1					
Trichlorofluoromethane	U	ND	0.300	0.900	ug/kg	0.797	1					
Trichlorotrifluoroethane	U	ND	1.50	4.50	ug/kg	0.797	1					
Vinyl chloride	U	ND	0.300	0.900	ug/kg	0.797	1					
cis-1,2-Dichloroethylene	U	ND	0.300	0.900	ug/kg	0.797	1					
cis-1,3-Dichloropropylene	U	ND	0.300	0.900	ug/kg	0.797	1					
m,p-Xylenes	U	ND	0.600	1.80	ug/kg	0.797	1					
o-Xylene	U	ND	0.300	0.900	ug/kg	0.797	1					
tert-Butyl methyl ether	J	0.360	0.300	0.900	ug/kg	0.797	1					
trans-1,2-Dichloroethylene	U	ND	0.300	0.900	ug/kg	0.797	1					
trans-1,3-Dichloropropylene	U	ND	0.300	0.900	ug/kg	0.797	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1318	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

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Company : Westinghouse Electric Company, LLC
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-1

Project: WNUC01519

Sample ID: 497105041

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	
4	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.2 ug/kg	50.0	103	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	48.4 ug/kg	50.0	108	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	47.3 ug/kg	50.0	105	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-32-2	Project:	WNUC01519
Sample ID:	497105042	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	14-NOV-19 08:50		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	13.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.387	1.14	mg/kg	9.88	1	JLD1	11/23/19	0612	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	11.4	2.16	15.1	ug/kg	93.8	2	PRB	11/30/19	1750	1941295	2
Uranium-238		1120	14.3	43.3	ug/kg	93.8	2					
Uranium-234	U	ND	2.16	10.8	ug/kg	93.8	2	PRB	12/02/19	1538	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-3 Project: WNUC01519
Sample ID: 497105043 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 08:54
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.7%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.383	1.13	mg/kg	9.95	1	JLD1	11/23/19	0642	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		16.4	2.24	15.7	ug/kg	98.8	2	PRB	11/30/19	1752	1941295	2
Uranium-238		1230	14.8	44.8	ug/kg	98.8	2					
Uranium-234	U	ND	2.24	11.2	ug/kg	98.8	2	PRB	12/02/19	1540	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-4
Sample ID: 497105044
Matrix: Soil
Collect Date: 14-NOV-19 08:59
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.5%

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.22	0.383	1.13	mg/kg	9.98	1	JLD1	11/23/19	0712	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		16.1	2.18	15.3	ug/kg	96.7	2	PRB	11/30/19	1754	1941295	2
Uranium-238		1930	14.4	43.7	ug/kg	96.7	2					
Uranium-234	U	ND	2.18	10.9	ug/kg	96.7	2	PRB	12/02/19	1542	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-5
Sample ID: 497105045
Matrix: Soil
Collect Date: 14-NOV-19 09:02
Receive Date: 20-NOV-19
Collector: Client
Moisture: 10.6%

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.03	0.380	1.12	mg/kg	10.0	1	JLD1	11/23/19	0742	1941949	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	13.2	2.15	15.1	ug/kg	96.3	2	PRB	11/30/19	1755	1941295	2
Uranium-238		1140	14.2	43.1	ug/kg	96.3	2					
Uranium-234	U	ND	2.15	10.8	ug/kg	96.3	2	PRB	12/02/19	1544	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	1757	1941944

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-6	Project: WNUC01519
Sample ID: 497105046	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:06	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.01	0.380	1.12	mg/kg	9.95	1	JLD1	11/23/19	1449	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		16.7	2.09	14.6	ug/kg	92.9	2	PRB	11/30/19	1757	1941295	2
Uranium-238		1270	13.8	41.7	ug/kg	92.9	2					
Uranium-234	U	ND	2.09	10.4	ug/kg	92.9	2	PRB	12/02/19	1546	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.282	0.848	ug/kg	0.755	1	MXL2	11/24/19	1706	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,1,2-Trichloroethane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,1-Dichloroethane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,1-Dichloroethylene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2,3-Trichlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2,4-Trichlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2-Dibromo-3-chloropropane	U	ND	0.424	0.848	ug/kg	0.755	1					
1,2-Dibromoethane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2-Dichlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2-Dichloroethane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,2-Dichloropropane	U	ND	0.282	0.848	ug/kg	0.755	1					
1,3-Dichlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,4-Dichlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
1,4-Dioxane	U	ND	1.41	4.24	ug/kg	0.755	1					
2-Butanone	U	ND	1.41	4.24	ug/kg	0.755	1					
2-Hexanone	U	ND	1.41	4.24	ug/kg	0.755	1					
4-Methyl-2-pentanone	U	ND	1.41	4.24	ug/kg	0.755	1					
Acetone	U	ND	1.41	4.24	ug/kg	0.755	1					
Benzene	U	ND	0.282	0.848	ug/kg	0.755	1					
Bromochloromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Bromodichloromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Bromoform	U	ND	0.282	0.848	ug/kg	0.755	1					
Bromomethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Carbon disulfide	U	ND	1.41	4.24	ug/kg	0.755	1					
Carbon tetrachloride	U	ND	0.282	0.848	ug/kg	0.755	1					
Chlorobenzene	U	ND	0.282	0.848	ug/kg	0.755	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-6 Project: WNUC01519
Sample ID: 497105046 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Chloroform	U	ND	0.282	0.848	ug/kg	0.755	1					
Chloromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Cyclohexane	U	ND	0.282	0.848	ug/kg	0.755	1					
Dibromochloromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Dichlorodifluoromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Ethylbenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
Isopropylbenzene	U	ND	0.282	0.848	ug/kg	0.755	1					
Methyl acetate	U	ND	1.41	4.24	ug/kg	0.755	1					
Methylcyclohexane	U	ND	0.282	0.848	ug/kg	0.755	1					
Methylene chloride	U	ND	1.41	4.24	ug/kg	0.755	1					
Styrene	U	ND	0.282	0.848	ug/kg	0.755	1					
Tetrachloroethylene	U	ND	0.282	0.848	ug/kg	0.755	1					
Toluene	U	ND	0.282	0.848	ug/kg	0.755	1					
Trichloroethylene	U	ND	0.282	0.848	ug/kg	0.755	1					
Trichlorofluoromethane	U	ND	0.282	0.848	ug/kg	0.755	1					
Trichlorotrifluoroethane	U	ND	1.41	4.24	ug/kg	0.755	1					
Vinyl chloride	U	ND	0.282	0.848	ug/kg	0.755	1					
cis-1,2-Dichloroethylene	U	ND	0.282	0.848	ug/kg	0.755	1					
cis-1,3-Dichloropropylene	U	ND	0.282	0.848	ug/kg	0.755	1					
m,p-Xylenes	U	ND	0.565	1.70	ug/kg	0.755	1					
o-Xylene	U	ND	0.282	0.848	ug/kg	0.755	1					
tert-Butyl methyl ether	U	ND	0.282	0.848	ug/kg	0.755	1					
trans-1,2-Dichloroethylene	U	ND	0.282	0.848	ug/kg	0.755	1					
trans-1,3-Dichloropropylene	U	ND	0.282	0.848	ug/kg	0.755	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1319	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-6

Project: WNUC01519

Sample ID: 497105046

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.6 ug/kg	50.0	108	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.4 ug/kg	50.0	107	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.4 ug/kg	50.0	105	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-7	Project: WNUC01519
Sample ID: 497105047	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:14	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.76	0.378	1.11	mg/kg	9.90	1	JLD1	11/23/19	1520	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	15.3	2.23	15.6	ug/kg	99.0	2	PRB	11/30/19	1759	1941295	2
Uranium-238		1370	14.7	44.5	ug/kg	99.0	2					
Uranium-234	U	ND	2.23	11.1	ug/kg	99.0	2	PRB	12/02/19	1548	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.273	0.819	ug/kg	0.729	1	MXL2	11/24/19	1732	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,1,2-Trichloroethane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,1-Dichloroethane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,1-Dichloroethylene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2,3-Trichlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2,4-Trichlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2-Dibromo-3-chloropropane	U	ND	0.410	0.819	ug/kg	0.729	1					
1,2-Dibromoethane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2-Dichlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2-Dichloroethane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,2-Dichloropropane	U	ND	0.273	0.819	ug/kg	0.729	1					
1,3-Dichlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,4-Dichlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
1,4-Dioxane	U	ND	13.7	41.0	ug/kg	0.729	1					
2-Butanone	U	ND	1.37	4.10	ug/kg	0.729	1					
2-Hexanone	U	ND	1.37	4.10	ug/kg	0.729	1					
4-Methyl-2-pentanone	U	ND	1.37	4.10	ug/kg	0.729	1					
Acetone		15.6	1.37	4.10	ug/kg	0.729	1					
Benzene	U	ND	0.273	0.819	ug/kg	0.729	1					
Bromochloromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Bromodichloromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Bromoform	U	ND	0.273	0.819	ug/kg	0.729	1					
Bromomethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Carbon disulfide	U	ND	1.37	4.10	ug/kg	0.729	1					
Carbon tetrachloride	U	ND	0.273	0.819	ug/kg	0.729	1					
Chlorobenzene	U	ND	0.273	0.819	ug/kg	0.729	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-7	Project: WNUC01519
Sample ID: 497105047	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Chloroform	U	ND	0.273	0.819	ug/kg	0.729	1					
Chloromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Cyclohexane	U	ND	0.273	0.819	ug/kg	0.729	1					
Dibromochloromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Dichlorodifluoromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Ethylbenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
Isopropylbenzene	U	ND	0.273	0.819	ug/kg	0.729	1					
Methyl acetate	U	ND	1.37	4.10	ug/kg	0.729	1					
Methylcyclohexane	U	ND	0.273	0.819	ug/kg	0.729	1					
Methylene chloride	U	ND	1.37	4.10	ug/kg	0.729	1					
Styrene	U	ND	0.273	0.819	ug/kg	0.729	1					
Tetrachloroethylene	U	ND	0.273	0.819	ug/kg	0.729	1					
Toluene		1.19	0.273	0.819	ug/kg	0.729	1					
Trichloroethylene	U	ND	0.273	0.819	ug/kg	0.729	1					
Trichlorofluoromethane	U	ND	0.273	0.819	ug/kg	0.729	1					
Trichlorotrifluoroethane	U	ND	1.37	4.10	ug/kg	0.729	1					
Vinyl chloride	U	ND	0.273	0.819	ug/kg	0.729	1					
cis-1,2-Dichloroethylene	U	ND	0.273	0.819	ug/kg	0.729	1					
cis-1,3-Dichloropropylene	U	ND	0.273	0.819	ug/kg	0.729	1					
m,p-Xylenes	U	ND	0.546	1.64	ug/kg	0.729	1					
o-Xylene	U	ND	0.273	0.819	ug/kg	0.729	1					
tert-Butyl methyl ether	U	ND	0.273	0.819	ug/kg	0.729	1					
trans-1,2-Dichloroethylene	U	ND	0.273	0.819	ug/kg	0.729	1					
trans-1,3-Dichloropropylene	U	ND	0.273	0.819	ug/kg	0.729	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1320	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-7

Project: WNUC01519

Sample ID: 497105047

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.1 ug/kg	50.0	105	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.9 ug/kg	50.0	110	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.3 ug/kg	50.0	106	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-30-8	Project:	WNUC01519
Sample ID:	497105048	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	14-NOV-19 09:19		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.888	0.380	1.12	mg/kg	9.95	1	JLD1	11/23/19	1551	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		21.7	2.17	15.2	ug/kg	96.7	2	PRB	11/30/19	1804	1941295	2
Uranium-238		1430	14.3	43.5	ug/kg	96.7	2					
Uranium-234	U	ND	2.17	10.9	ug/kg	96.7	2	PRB	12/02/19	1550	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-9 Project: WNUC01519
Sample ID: 497105049 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 09:22
Receive Date: 20-NOV-19
Collector: Client
Moisture: 9.86%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.762	0.378	1.11	mg/kg	10.0	1	JLD1	11/23/19	1622	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		22.0	2.10	14.7	ug/kg	94.7	2	PRB	11/30/19	1806	1941295	2
Uranium-238		1420	13.9	42.0	ug/kg	94.7	2					
Uranium-234	U	ND	2.10	10.5	ug/kg	94.7	2	PRB	12/02/19	1552	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-10 Project: WNUC01519
Sample ID: 497105050 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 09:28
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.34	0.389	1.14	mg/kg	9.98	1	JLD1	11/23/19	1653	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	11.1	2.15	15.0	ug/kg	93.6	2	PRB	11/30/19	1807	1941295	2
Uranium-238		1040	14.2	43.0	ug/kg	93.6	2					
Uranium-234	U	ND	2.15	10.7	ug/kg	93.6	2	PRB	12/02/19	1554	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-29-11	Project:	WNUC01519
Sample ID:	497105051	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	14-NOV-19 09:34		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.75	0.376	1.11	mg/kg	9.88	1	JLD1	11/23/19	1723	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		66.4	2.12	14.8	ug/kg	94.7	2	PRB	11/30/19	1809	1941295	2
Uranium-238		2960	14.0	42.4	ug/kg	94.7	2					
Uranium-234	U	ND	2.12	10.6	ug/kg	94.7	2	PRB	12/02/19	1600	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-12	Project: WNUC01519
Sample ID: 497105052	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:39	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.60	0.383	1.13	mg/kg	9.90	1	JLD1	11/23/19	1754	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		84.7	2.13	14.9	ug/kg	93.6	2	PRB	11/30/19	1811	1941295	2
Uranium-238		3830	14.1	42.7	ug/kg	93.6	2					
Uranium-234	U	ND	2.13	10.7	ug/kg	93.6	2	PRB	12/02/19	1602	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.262	0.785	ug/kg	0.690	1	MXL2	11/26/19	1129	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,1,2-Trichloroethane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,1-Dichloroethane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,1-Dichloroethylene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2,3-Trichlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2,4-Trichlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2-Dibromo-3-chloropropane	U	ND	0.393	0.785	ug/kg	0.690	1					
1,2-Dibromoethane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2-Dichlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2-Dichloroethane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,2-Dichloropropane	U	ND	0.262	0.785	ug/kg	0.690	1					
1,3-Dichlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,4-Dichlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
1,4-Dioxane	U	ND	13.1	39.3	ug/kg	0.690	1					
2-Butanone	U	ND	1.31	3.93	ug/kg	0.690	1					
2-Hexanone	J	1.37	1.31	3.93	ug/kg	0.690	1					
4-Methyl-2-pentanone	U	ND	1.31	3.93	ug/kg	0.690	1					
Acetone	U	ND	1.31	3.93	ug/kg	0.690	1					
Benzene	U	ND	0.262	0.785	ug/kg	0.690	1					
Bromochloromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Bromodichloromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Bromoform	U	ND	0.262	0.785	ug/kg	0.690	1					
Bromomethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Carbon disulfide	U	ND	1.31	3.93	ug/kg	0.690	1					
Carbon tetrachloride	U	ND	0.262	0.785	ug/kg	0.690	1					
Chlorobenzene	U	ND	0.262	0.785	ug/kg	0.690	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-12	Project: WNUC01519
Sample ID: 497105052	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Chloroform	U	ND	0.262	0.785	ug/kg	0.690	1					
Chloromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Cyclohexane	U	ND	0.262	0.785	ug/kg	0.690	1					
Dibromochloromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Dichlorodifluoromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Ethylbenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
Isopropylbenzene	U	ND	0.262	0.785	ug/kg	0.690	1					
Methyl acetate	U	ND	1.31	3.93	ug/kg	0.690	1					
Methylcyclohexane	U	ND	0.262	0.785	ug/kg	0.690	1					
Methylene chloride	U	ND	1.31	3.93	ug/kg	0.690	1					
Styrene	U	ND	0.262	0.785	ug/kg	0.690	1					
Tetrachloroethylene	U	ND	0.262	0.785	ug/kg	0.690	1					
Toluene	U	ND	0.262	0.785	ug/kg	0.690	1					
Trichloroethylene	U	ND	0.262	0.785	ug/kg	0.690	1					
Trichlorofluoromethane	U	ND	0.262	0.785	ug/kg	0.690	1					
Trichlorotrifluoroethane	U	ND	1.31	3.93	ug/kg	0.690	1					
Vinyl chloride	U	ND	0.262	0.785	ug/kg	0.690	1					
cis-1,2-Dichloroethylene	U	ND	0.262	0.785	ug/kg	0.690	1					
cis-1,3-Dichloropropylene	U	ND	0.262	0.785	ug/kg	0.690	1					
m,p-Xylenes	U	ND	0.524	1.57	ug/kg	0.690	1					
o-Xylene	U	ND	0.262	0.785	ug/kg	0.690	1					
tert-Butyl methyl ether	U	ND	0.262	0.785	ug/kg	0.690	1					
trans-1,2-Dichloroethylene	U	ND	0.262	0.785	ug/kg	0.690	1					
trans-1,3-Dichloropropylene	U	ND	0.262	0.785	ug/kg	0.690	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/26/19	1022	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-12

Project: WNUC01519

Sample ID: 497105052

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.9 ug/kg	50.0	109	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	41.9 ug/kg	50.0	107	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	39.6 ug/kg	50.0	101	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-28-13	Project:	WNUC01519
Sample ID:	497105053	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	14-NOV-19 09:46		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.9%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.08	0.376	1.11	mg/kg	9.85	1	JLD1	11/23/19	1825	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		21.3	2.18	15.2	ug/kg	96.9	2	PRB	11/30/19	1812	1941295	2
Uranium-238		1610	14.4	43.5	ug/kg	96.9	2					
Uranium-234	U	ND	2.18	10.9	ug/kg	96.9	2	PRB	12/02/19	1604	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.297	0.891	ug/kg	0.794	1	MXL2	11/24/19	1824	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,1,2-Trichloroethane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,1-Dichloroethane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,1-Dichloroethylene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2,3-Trichlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2,4-Trichlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2-Dibromo-3-chloropropane	U	ND	0.445	0.891	ug/kg	0.794	1					
1,2-Dibromoethane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2-Dichlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2-Dichloroethane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,2-Dichloropropane	U	ND	0.297	0.891	ug/kg	0.794	1					
1,3-Dichlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,4-Dichlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
1,4-Dioxane	U	ND	14.8	44.5	ug/kg	0.794	1					
2-Butanone		8.35	1.48	4.45	ug/kg	0.794	1					
2-Hexanone	U	ND	1.48	4.45	ug/kg	0.794	1					
4-Methyl-2-pentanone	U	ND	1.48	4.45	ug/kg	0.794	1					
Acetone		383	1.48	4.45	ug/kg	0.794	1					
Benzene	U	ND	0.297	0.891	ug/kg	0.794	1					
Bromochloromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Bromodichloromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Bromoform	U	ND	0.297	0.891	ug/kg	0.794	1					
Bromomethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Carbon disulfide	U	ND	1.48	4.45	ug/kg	0.794	1					
Carbon tetrachloride	U	ND	0.297	0.891	ug/kg	0.794	1					
Chlorobenzene	U	ND	0.297	0.891	ug/kg	0.794	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-13 Project: WNUC01519
Sample ID: 497105053 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Chloroform	U	ND	0.297	0.891	ug/kg	0.794	1					
Chloromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Cyclohexane	U	ND	0.297	0.891	ug/kg	0.794	1					
Dibromochloromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Dichlorodifluoromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Ethylbenzene		1.35	0.297	0.891	ug/kg	0.794	1					
Isopropylbenzene	U	ND	0.297	0.891	ug/kg	0.794	1					
Methyl acetate	U	ND	1.48	4.45	ug/kg	0.794	1					
Methylcyclohexane	U	ND	0.297	0.891	ug/kg	0.794	1					
Methylene chloride	U	ND	1.48	4.45	ug/kg	0.794	1					
Styrene	U	ND	0.297	0.891	ug/kg	0.794	1					
Tetrachloroethylene	U	ND	0.297	0.891	ug/kg	0.794	1					
Toluene	J	0.543	0.297	0.891	ug/kg	0.794	1					
Trichloroethylene	U	ND	0.297	0.891	ug/kg	0.794	1					
Trichlorofluoromethane	U	ND	0.297	0.891	ug/kg	0.794	1					
Trichlorotrifluoroethane	U	ND	1.48	4.45	ug/kg	0.794	1					
Vinyl chloride	U	ND	0.297	0.891	ug/kg	0.794	1					
cis-1,2-Dichloroethylene	U	ND	0.297	0.891	ug/kg	0.794	1					
cis-1,3-Dichloropropylene	U	ND	0.297	0.891	ug/kg	0.794	1					
m,p-Xylenes		9.55	0.594	1.78	ug/kg	0.794	1					
o-Xylene		4.14	0.297	0.891	ug/kg	0.794	1					
tert-Butyl methyl ether	U	ND	0.297	0.891	ug/kg	0.794	1					
trans-1,2-Dichloroethylene	U	ND	0.297	0.891	ug/kg	0.794	1					
trans-1,3-Dichloropropylene	U	ND	0.297	0.891	ug/kg	0.794	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1321	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-13

Project: WNUC01519

Sample ID: 497105053

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	48.4 ug/kg	50.0	109	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	48.5 ug/kg	50.0	109	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.5 ug/kg	50.0	104	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-28-14	Project:	WNUC01519
Sample ID:	497105054	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	14-NOV-19 09:50		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	10.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.29	0.376	1.11	mg/kg	9.95	1	JLD1	11/23/19	1856	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		26.9	2.09	14.6	ug/kg	94.0	2	PRB	11/30/19	1817	1941295	2
Uranium-238		2110	13.8	41.8	ug/kg	94.0	2					
Uranium-234	U	ND	2.09	10.5	ug/kg	94.0	2	PRB	12/02/19	1606	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6020B	
3	SW846 3050B/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-15 Project: WNUC01519
Sample ID: 497105055 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 09:53
Receive Date: 20-NOV-19
Collector: Client
Moisture: 10.4%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.90	0.375	1.10	mg/kg	9.88	1	JLD1	11/23/19	1927	1941989	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		72.9	2.19	15.3	ug/kg	98.2	2	PRB	11/30/19	1819	1941295	2
Uranium-238		3590	14.5	43.8	ug/kg	98.2	2					
Uranium-234	U	ND	2.19	11.0	ug/kg	98.2	2	PRB	12/02/19	1608	1941295	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	11/21/19	2017	1941987

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-16	Project: WNUC01519
Sample ID: 497105056	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:52	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.768	0.381	1.12	mg/kg	10.1	1	CH5	11/23/19	1337	1941889	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	10.7	2.12	14.8	ug/kg	95.1	2	PRB	11/30/19	1821	1941295	2
Uranium-238		1100	14.0	42.4	ug/kg	95.1	2					
Uranium-234	U	ND	2.12	10.6	ug/kg	95.1	2	PRB	12/02/19	1610	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.291	0.875	ug/kg	0.785	1	MXL2	11/24/19	1849	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.291	0.875	ug/kg	0.785	1					
1,1,2-Trichloroethane	U	ND	0.291	0.875	ug/kg	0.785	1					
1,1-Dichloroethane	U	ND	0.291	0.875	ug/kg	0.785	1					
1,1-Dichloroethylene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,2,3-Trichlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,2,4-Trichlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,2-Dibromo-3-chloropropane	U	ND	0.438	0.875	ug/kg	0.785	1					
1,2-Dibromoethane	U	ND	0.291	0.875	ug/kg	0.785	1					
1,2-Dichlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,2-Dichloroethane	J	0.516	0.291	0.875	ug/kg	0.785	1					
1,2-Dichloropropane	U	ND	0.291	0.875	ug/kg	0.785	1					
1,3-Dichlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,4-Dichlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
1,4-Dioxane	U	ND	1.46	4.38	ug/kg	0.785	1					
2-Butanone	U	ND	1.46	4.38	ug/kg	0.785	1					
2-Hexanone	U	ND	1.46	4.38	ug/kg	0.785	1					
4-Methyl-2-pentanone	U	ND	1.46	4.38	ug/kg	0.785	1					
Acetone		6.55	1.46	4.38	ug/kg	0.785	1					
Benzene	U	ND	0.291	0.875	ug/kg	0.785	1					
Bromochloromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Bromodichloromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Bromoform	U	ND	0.291	0.875	ug/kg	0.785	1					
Bromomethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Carbon disulfide	U	ND	1.46	4.38	ug/kg	0.785	1					
Carbon tetrachloride	U	ND	0.291	0.875	ug/kg	0.785	1					
Chlorobenzene	U	ND	0.291	0.875	ug/kg	0.785	1					

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-16 Project: WNUC01519
Sample ID: 497105056 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Chloroform	U	ND	0.291	0.875	ug/kg	0.785	1					
Chloromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Cyclohexane	U	ND	0.291	0.875	ug/kg	0.785	1					
Dibromochloromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Dichlorodifluoromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Ethylbenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
Isopropylbenzene	U	ND	0.291	0.875	ug/kg	0.785	1					
Methyl acetate	U	ND	1.46	4.38	ug/kg	0.785	1					
Methylcyclohexane	J	0.359	0.291	0.875	ug/kg	0.785	1					
Methylene chloride	U	ND	1.46	4.38	ug/kg	0.785	1					
Styrene	U	ND	0.291	0.875	ug/kg	0.785	1					
Tetrachloroethylene	U	ND	0.291	0.875	ug/kg	0.785	1					
Toluene	U	ND	0.291	0.875	ug/kg	0.785	1					
Trichloroethylene	U	ND	0.291	0.875	ug/kg	0.785	1					
Trichlorofluoromethane	U	ND	0.291	0.875	ug/kg	0.785	1					
Trichlorotrifluoroethane	U	ND	1.46	4.38	ug/kg	0.785	1					
Vinyl chloride	U	ND	0.291	0.875	ug/kg	0.785	1					
cis-1,2-Dichloroethylene	U	ND	0.291	0.875	ug/kg	0.785	1					
cis-1,3-Dichloropropylene	U	ND	0.291	0.875	ug/kg	0.785	1					
m,p-Xylenes	U	ND	0.584	1.75	ug/kg	0.785	1					
o-Xylene	U	ND	0.291	0.875	ug/kg	0.785	1					
tert-Butyl methyl ether	U	ND	0.291	0.875	ug/kg	0.785	1					
trans-1,2-Dichloroethylene	U	ND	0.291	0.875	ug/kg	0.785	1					
trans-1,3-Dichloropropylene	U	ND	0.291	0.875	ug/kg	0.785	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1322	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2156	1941880

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-16

Project: WNUC01519

Sample ID: 497105056

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.9 ug/kg	50.0	103	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.4 ug/kg	50.0	106	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.3 ug/kg	50.0	103	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-17 Project: WNUC01519
Sample ID: 497105057 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 09:56
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.66	0.379	1.11	mg/kg	9.71	1	CH5	11/23/19	1606	1942419	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	9.83	2.19	15.3	ug/kg	95.4	2	PRB	11/30/19	1823	1941295	2
Uranium-238		1030	14.5	43.8	ug/kg	95.4	2					
Uranium-234	U	ND	2.19	11.0	ug/kg	95.4	2	PRB	12/02/19	1612	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.292	0.877	ug/kg	0.765	1	MXL2	11/24/19	1915	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,1,2-Trichloroethane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,1-Dichloroethane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,1-Dichloroethylene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2,3-Trichlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2,4-Trichlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2-Dibromo-3-chloropropane	U	ND	0.439	0.877	ug/kg	0.765	1					
1,2-Dibromoethane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2-Dichlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2-Dichloroethane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,2-Dichloropropane	U	ND	0.292	0.877	ug/kg	0.765	1					
1,3-Dichlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,4-Dichlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
1,4-Dioxane	U	ND	14.6	43.9	ug/kg	0.765	1					
2-Butanone	U	ND	1.46	4.39	ug/kg	0.765	1					
2-Hexanone	U	ND	1.46	4.39	ug/kg	0.765	1					
4-Methyl-2-pentanone	U	ND	1.46	4.39	ug/kg	0.765	1					
Acetone		35.5	1.46	4.39	ug/kg	0.765	1					
Benzene	U	ND	0.292	0.877	ug/kg	0.765	1					
Bromochloromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Bromodichloromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Bromoform	U	ND	0.292	0.877	ug/kg	0.765	1					
Bromomethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Carbon disulfide	U	ND	1.46	4.39	ug/kg	0.765	1					
Carbon tetrachloride	U	ND	0.292	0.877	ug/kg	0.765	1					
Chlorobenzene	U	ND	0.292	0.877	ug/kg	0.765	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-17	Project: WNUC01519
Sample ID: 497105057	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Chloroform	U	ND	0.292	0.877	ug/kg	0.765	1					
Chloromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Cyclohexane	U	ND	0.292	0.877	ug/kg	0.765	1					
Dibromochloromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Dichlorodifluoromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Ethylbenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
Isopropylbenzene	U	ND	0.292	0.877	ug/kg	0.765	1					
Methyl acetate	U	ND	1.46	4.39	ug/kg	0.765	1					
Methylcyclohexane	U	ND	0.292	0.877	ug/kg	0.765	1					
Methylene chloride	U	ND	1.46	4.39	ug/kg	0.765	1					
Styrene	U	ND	0.292	0.877	ug/kg	0.765	1					
Tetrachloroethylene	U	ND	0.292	0.877	ug/kg	0.765	1					
Toluene	U	ND	0.292	0.877	ug/kg	0.765	1					
Trichloroethylene	U	ND	0.292	0.877	ug/kg	0.765	1					
Trichlorofluoromethane	U	ND	0.292	0.877	ug/kg	0.765	1					
Trichlorotrifluoroethane	U	ND	1.46	4.39	ug/kg	0.765	1					
Vinyl chloride	U	ND	0.292	0.877	ug/kg	0.765	1					
cis-1,2-Dichloroethylene	U	ND	0.292	0.877	ug/kg	0.765	1					
cis-1,3-Dichloropropylene	U	ND	0.292	0.877	ug/kg	0.765	1					
m,p-Xylenes	U	ND	0.585	1.75	ug/kg	0.765	1					
o-Xylene	U	ND	0.292	0.877	ug/kg	0.765	1					
tert-Butyl methyl ether	U	ND	0.292	0.877	ug/kg	0.765	1					
trans-1,2-Dichloroethylene	U	ND	0.292	0.877	ug/kg	0.765	1					
trans-1,3-Dichloropropylene	U	ND	0.292	0.877	ug/kg	0.765	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1323	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2204	1942418

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-17

Project: WNUC01519

Sample ID: 497105057

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.5 ug/kg	50.0	106	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.0 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.3 ug/kg	50.0	106	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-18	Project: WNUC01519
Sample ID: 497105058	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 10:02	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.21	0.371	1.09	mg/kg	9.73	1	CH5	11/23/19	1736	1942419	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		117	2.11	14.8	ug/kg	94.0	2	PRB	11/30/19	1824	1941295	2
Uranium-238		5860	13.9	42.2	ug/kg	94.0	2					
Uranium-234	U	ND	2.11	10.5	ug/kg	94.0	2	PRB	12/02/19	1614	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.268	0.806	ug/kg	0.718	1	MXL2	11/24/19	1941	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,1,2-Trichloroethane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,1-Dichloroethane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,1-Dichloroethylene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2,3-Trichlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2,4-Trichlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2-Dibromo-3-chloropropane	U	ND	0.403	0.806	ug/kg	0.718	1					
1,2-Dibromoethane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2-Dichlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2-Dichloroethane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,2-Dichloropropane	U	ND	0.268	0.806	ug/kg	0.718	1					
1,3-Dichlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,4-Dichlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
1,4-Dioxane	U	ND	13.4	40.3	ug/kg	0.718	1					
2-Butanone	J	3.94	1.34	4.03	ug/kg	0.718	1					
2-Hexanone	U	ND	1.34	4.03	ug/kg	0.718	1					
4-Methyl-2-pentanone	U	ND	1.34	4.03	ug/kg	0.718	1					
Acetone		58.3	1.34	4.03	ug/kg	0.718	1					
Benzene	U	ND	0.268	0.806	ug/kg	0.718	1					
Bromochloromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Bromodichloromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Bromoform	U	ND	0.268	0.806	ug/kg	0.718	1					
Bromomethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Carbon disulfide	U	ND	1.34	4.03	ug/kg	0.718	1					
Carbon tetrachloride	U	ND	0.268	0.806	ug/kg	0.718	1					
Chlorobenzene	U	ND	0.268	0.806	ug/kg	0.718	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-18

Project: WNUC01519

Sample ID: 497105058

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Chloroform	U	ND	0.268	0.806	ug/kg	0.718	1					
Chloromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Cyclohexane	U	ND	0.268	0.806	ug/kg	0.718	1					
Dibromochloromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Dichlorodifluoromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Ethylbenzene	J	0.282	0.268	0.806	ug/kg	0.718	1					
Isopropylbenzene	U	ND	0.268	0.806	ug/kg	0.718	1					
Methyl acetate	U	ND	1.34	4.03	ug/kg	0.718	1					
Methylcyclohexane	J	0.274	0.268	0.806	ug/kg	0.718	1					
Methylene chloride	U	ND	1.34	4.03	ug/kg	0.718	1					
Styrene	U	ND	0.268	0.806	ug/kg	0.718	1					
Tetrachloroethylene	U	ND	0.268	0.806	ug/kg	0.718	1					
Toluene		2.20	0.268	0.806	ug/kg	0.718	1					
Trichloroethylene	U	ND	0.268	0.806	ug/kg	0.718	1					
Trichlorofluoromethane	U	ND	0.268	0.806	ug/kg	0.718	1					
Trichlorotrifluoroethane	U	ND	1.34	4.03	ug/kg	0.718	1					
Vinyl chloride	U	ND	0.268	0.806	ug/kg	0.718	1					
cis-1,2-Dichloroethylene	U	ND	0.268	0.806	ug/kg	0.718	1					
cis-1,3-Dichloropropylene	U	ND	0.268	0.806	ug/kg	0.718	1					
m,p-Xylenes		1.88	0.537	1.61	ug/kg	0.718	1					
o-Xylene		0.902	0.268	0.806	ug/kg	0.718	1					
tert-Butyl methyl ether	U	ND	0.268	0.806	ug/kg	0.718	1					
trans-1,2-Dichloroethylene	U	ND	0.268	0.806	ug/kg	0.718	1					
trans-1,3-Dichloropropylene	U	ND	0.268	0.806	ug/kg	0.718	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1324	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2204	1942418

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-18

Project: WNUC01519

Sample ID: 497105058

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	40.1 ug/kg	50.0	100	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.2 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.9 ug/kg	50.0	107	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-19	Project: WNUC01519
Sample ID: 497105059	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 10:05	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 8.15%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.13	0.373	1.10	mg/kg	10.1	1	CH5	11/23/19	1805	1942419	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		85.9	2.09	14.6	ug/kg	95.8	2	PRB	11/30/19	1826	1941295	2
Uranium-238		2340	13.8	41.7	ug/kg	95.8	2					
Uranium-234	U	ND	2.09	10.4	ug/kg	95.8	2	PRB	12/02/19	1616	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.289	0.867	ug/kg	0.796	1	MXL2	11/24/19	2007	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,1,2-Trichloroethane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,1-Dichloroethane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,1-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2,3-Trichlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2,4-Trichlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2-Dibromo-3-chloropropane	U	ND	0.433	0.867	ug/kg	0.796	1					
1,2-Dibromoethane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2-Dichloroethane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,2-Dichloropropane	U	ND	0.289	0.867	ug/kg	0.796	1					
1,3-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,4-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
1,4-Dioxane	U	ND	1.44	4.33	ug/kg	0.796	1					
2-Butanone	U	ND	1.44	4.33	ug/kg	0.796	1					
2-Hexanone	U	ND	1.44	4.33	ug/kg	0.796	1					
4-Methyl-2-pentanone	U	ND	1.44	4.33	ug/kg	0.796	1					
Acetone		31.0	1.44	4.33	ug/kg	0.796	1					
Benzene	U	ND	0.289	0.867	ug/kg	0.796	1					
Bromochloromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Bromodichloromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Bromoform	U	ND	0.289	0.867	ug/kg	0.796	1					
Bromomethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Carbon disulfide	U	ND	1.44	4.33	ug/kg	0.796	1					
Carbon tetrachloride	U	ND	0.289	0.867	ug/kg	0.796	1					
Chlorobenzene	U	ND	0.289	0.867	ug/kg	0.796	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-19	Project: WNUC01519
Sample ID: 497105059	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Chloroform	U	ND	0.289	0.867	ug/kg	0.796	1					
Chloromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Cyclohexane	U	ND	0.289	0.867	ug/kg	0.796	1					
Dibromochloromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Dichlorodifluoromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Ethylbenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
Isopropylbenzene	U	ND	0.289	0.867	ug/kg	0.796	1					
Methyl acetate	U	ND	1.44	4.33	ug/kg	0.796	1					
Methylcyclohexane	J	0.321	0.289	0.867	ug/kg	0.796	1					
Methylene chloride	U	ND	1.44	4.33	ug/kg	0.796	1					
Styrene	U	ND	0.289	0.867	ug/kg	0.796	1					
Tetrachloroethylene	U	ND	0.289	0.867	ug/kg	0.796	1					
Toluene		3.15	0.289	0.867	ug/kg	0.796	1					
Trichloroethylene	U	ND	0.289	0.867	ug/kg	0.796	1					
Trichlorofluoromethane	U	ND	0.289	0.867	ug/kg	0.796	1					
Trichlorotrifluoroethane	U	ND	1.44	4.33	ug/kg	0.796	1					
Vinyl chloride	U	ND	0.289	0.867	ug/kg	0.796	1					
cis-1,2-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.796	1					
cis-1,3-Dichloropropylene	U	ND	0.289	0.867	ug/kg	0.796	1					
m,p-Xylenes	U	ND	0.578	1.73	ug/kg	0.796	1					
o-Xylene	U	ND	0.289	0.867	ug/kg	0.796	1					
tert-Butyl methyl ether	U	ND	0.289	0.867	ug/kg	0.796	1					
trans-1,2-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.796	1					
trans-1,3-Dichloropropylene	U	ND	0.289	0.867	ug/kg	0.796	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1325	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2204	1942418

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-19

Project: WNUC01519

Sample ID: 497105059

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.6 ug/kg	50.0	107	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.4 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.1 ug/kg	50.0	104	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-20	Project: WNUC01519
Sample ID: 497105060	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 10:10	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.00	0.378	1.11	mg/kg	9.93	1	CH5	11/23/19	1835	1942419	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		85.2	2.13	14.9	ug/kg	95.2	2	PRB	11/30/19	1828	1941295	2
Uranium-238		2900	14.1	42.7	ug/kg	95.2	2					
Uranium-234	U	ND	2.13	10.7	ug/kg	95.2	2	PRB	12/02/19	1618	1941295	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.289	0.867	ug/kg	0.774	1	MXL2	11/24/19	2033	1942304	4
1,1,2,2-Tetrachloroethane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,1,2-Trichloroethane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,1-Dichloroethane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,1-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2,3-Trichlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2,4-Trichlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2-Dibromo-3-chloropropane	U	ND	0.434	0.867	ug/kg	0.774	1					
1,2-Dibromoethane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2-Dichloroethane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,2-Dichloropropane	U	ND	0.289	0.867	ug/kg	0.774	1					
1,3-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,4-Dichlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
1,4-Dioxane	U	ND	1.45	4.34	ug/kg	0.774	1					
2-Butanone	U	ND	1.45	4.34	ug/kg	0.774	1					
2-Hexanone	U	ND	1.45	4.34	ug/kg	0.774	1					
4-Methyl-2-pentanone	U	ND	1.45	4.34	ug/kg	0.774	1					
Acetone	J	4.00	1.45	4.34	ug/kg	0.774	1					
Benzene	U	ND	0.289	0.867	ug/kg	0.774	1					
Bromochloromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Bromodichloromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Bromoform	U	ND	0.289	0.867	ug/kg	0.774	1					
Bromomethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Carbon disulfide	U	ND	1.45	4.34	ug/kg	0.774	1					
Carbon tetrachloride	U	ND	0.289	0.867	ug/kg	0.774	1					
Chlorobenzene	U	ND	0.289	0.867	ug/kg	0.774	1					

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-20	Project: WNUC01519
Sample ID: 497105060	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
Chloroethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Chloroform	U	ND	0.289	0.867	ug/kg	0.774	1					
Chloromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Cyclohexane	U	ND	0.289	0.867	ug/kg	0.774	1					
Dibromochloromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Dichlorodifluoromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Ethylbenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
Isopropylbenzene	U	ND	0.289	0.867	ug/kg	0.774	1					
Methyl acetate	U	ND	1.45	4.34	ug/kg	0.774	1					
Methylcyclohexane	U	ND	0.289	0.867	ug/kg	0.774	1					
Methylene chloride	U	ND	1.45	4.34	ug/kg	0.774	1					
Styrene	U	ND	0.289	0.867	ug/kg	0.774	1					
Tetrachloroethylene	U	ND	0.289	0.867	ug/kg	0.774	1					
Toluene	U	ND	0.289	0.867	ug/kg	0.774	1					
Trichloroethylene	U	ND	0.289	0.867	ug/kg	0.774	1					
Trichlorofluoromethane	U	ND	0.289	0.867	ug/kg	0.774	1					
Trichlorotrifluoroethane	U	ND	1.45	4.34	ug/kg	0.774	1					
Vinyl chloride	U	ND	0.289	0.867	ug/kg	0.774	1					
cis-1,2-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.774	1					
cis-1,3-Dichloropropylene	U	ND	0.289	0.867	ug/kg	0.774	1					
m,p-Xylenes	U	ND	0.579	1.73	ug/kg	0.774	1					
o-Xylene	U	ND	0.289	0.867	ug/kg	0.774	1					
tert-Butyl methyl ether	U	ND	0.289	0.867	ug/kg	0.774	1					
trans-1,2-Dichloroethylene	U	ND	0.289	0.867	ug/kg	0.774	1					
trans-1,3-Dichloropropylene	U	ND	0.289	0.867	ug/kg	0.774	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/21/19	1030	1941294
SW846 5035A	5035A/8260B Prep	MXL2	11/24/19	1326	1942301
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/22/19	2204	1942418

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-20

Project: WNUC01519

Sample ID: 497105060

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6020B		
3	SW846 3050B/6020B		
4	SW846 8260B		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.0 ug/kg	50.0	106	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	49.3 ug/kg	50.0	114	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.9 ug/kg	50.0	106	(81%-120%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-1	Project: WNUC01519
Sample ID: 497105001	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:02	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.60	+/-0.279	0.115	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236	U	0.0417	+/-0.0601	0.0725	0.500	pCi/g							
Uranium-238		0.845	+/-0.203	0.0806	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.602	+/-2.64	4.64	5.00	pCi/g			JJ3	01/14/20	0541	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-2	Project: WNUC01519
Sample ID: 497105002	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:06	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.79%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.862	+/-0.220	0.0989	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236	U	0.0477	+/-0.0688	0.0829	0.500	pCi/g							
Uranium-238		0.675	+/-0.194	0.0855	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.547	+/-2.42	4.25	5.00	pCi/g			JJ3	01/14/20	0558	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.6	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-3	Project: WNUC01519
Sample ID: 497105003	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:10	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 8.27%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.56	+/-0.297	0.0952	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236	U	0.0313	+/-0.0614	0.0851	0.500	pCi/g							
Uranium-238		0.787	+/-0.211	0.0689	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	1.32	+/-2.51	4.29	5.00	pCi/g			JJ3	01/14/20	0614	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			76.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-4	Project: WNUC01519
Sample ID: 497105004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:16	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		6.09	+/-0.569	0.116	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236		0.132	+/-0.100	0.0814	0.500	pCi/g							
Uranium-238		2.08	+/-0.333	0.0658	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.88	+/-2.40	4.33	5.00	pCi/g			JJ3	01/14/20	0631	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-18-5	Project: WNUC01519
Sample ID: 497105005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:19	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.80	+/-0.342	0.113	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236		0.0613	+/-0.0807	0.0613	0.500	pCi/g							
Uranium-238		1.14	+/-0.271	0.0496	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.39	+/-2.51	4.48	5.00	pCi/g			JJ3	01/14/20	0647	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			76.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-1	Project: WNUC01519
Sample ID: 497105006	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:36	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.55%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.21	+/-0.249	0.0975	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236	U	0.0320	+/-0.0548	0.0480	0.500	pCi/g							
Uranium-238		0.774	+/-0.198	0.0621	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.390	+/-2.53	4.45	5.00	pCi/g			JJ3	01/14/20	0704	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.5	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
 Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-2	Project: WNUC01519
Sample ID: 497105007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:39	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 6.42%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.61	+/-0.307	0.110	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236	U	0.0690	+/-0.0814	0.0880	0.500	pCi/g							
Uranium-238		0.717	+/-0.206	0.0907	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.82	+/-2.53	4.54	5.00	pCi/g		JJ3		01/14/20	0720	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			82.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-3	Project: WNUC01519
Sample ID: 497105008	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:41	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 5.45%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Rad Alpha Spec Analysis

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		1.43	+/-0.278	0.115	0.500	pCi/g			EXC2	11/26/19	0935	1941441	1
Uranium-235/236		0.110	+/-0.0944	0.0933	0.500	pCi/g							
Uranium-238		0.773	+/-0.204	0.0653	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-1.36	+/-2.54	4.53	5.00	pCi/g			JJ3	01/14/20	0737	1957084	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-4	Project: WNUC01519
Sample ID: 497105009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:45	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.18	+/-0.270	0.124	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236	U	0.0289	+/-0.0664	0.105	0.500	pCi/g							
Uranium-238		0.881	+/-0.232	0.0940	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.552	+/-2.45	4.32	5.00	pCi/g			JJ3	01/14/20	0753	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-20-5	Project: WNUC01519
Sample ID: 497105010	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 12:50	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.37	+/-0.375	0.0837	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236		0.227	+/-0.111	0.0400	0.500	pCi/g							
Uranium-238		1.72	+/-0.268	0.0597	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0546	+/-2.51	4.37	5.00	pCi/g			JJ3	01/14/20	0810	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			103	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88.5	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-1	Project: WNUC01519
Sample ID: 497105011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:07	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.888	+/-0.211	0.0908	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236	U	0.0355	+/-0.0628	0.0951	0.500	pCi/g							
Uranium-238		0.734	+/-0.192	0.0769	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.06	+/-2.62	4.66	5.00	pCi/g			JJ3	01/14/20	0826	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			90.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-2	Project: WNUC01519
Sample ID: 497105012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:10	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.777	+/-0.193	0.0912	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236	U	0.0259	+/-0.0510	0.0707	0.500	pCi/g							
Uranium-238		0.937	+/-0.209	0.0661	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.00	+/-2.33	4.14	5.00	pCi/g			JJ3	01/14/20	0843	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-3	Project: WNUC01519
Sample ID: 497105013	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:12	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.38	+/-0.282	0.117	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236	U	0.0271	+/-0.0623	0.0988	0.500	pCi/g							
Uranium-238		0.845	+/-0.222	0.107	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.00313	+/-2.31	4.03	5.00	pCi/g			JJ3	01/14/20	0859	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.9	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-4	Project: WNUC01519
Sample ID: 497105014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:15	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.98%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.05	+/-0.261	0.123	0.500	pCi/g			EXC2	11/26/19	0937	1941441	1
Uranium-235/236		0.115	+/-0.104	0.0954	0.500	pCi/g							
Uranium-238		0.601	+/-0.201	0.125	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.03	+/-2.41	4.36	5.00	pCi/g			JJ3	01/14/20	0916	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.6	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-5	Project: WNUC01519
Sample ID: 497105015	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:45	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.57	+/-0.351	0.148	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236	U	0.0312	+/-0.0859	0.149	0.500	pCi/g							
Uranium-238		0.701	+/-0.236	0.109	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.854	+/-2.35	4.17	5.00	pCi/g			JJ3	01/14/20	0932	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.8	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-6	Project: WNUC01519
Sample ID: 497105016	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:50	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.60	+/-0.340	0.154	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236	U	0.0562	+/-0.0893	0.124	0.500	pCi/g							
Uranium-238		0.831	+/-0.249	0.146	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.803	+/-2.34	4.14	5.00	pCi/g			JJ3	01/14/20	0949	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-7	Project: WNUC01519
Sample ID: 497105017	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 13:55	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.15	+/-0.267	0.152	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236	U	0.0281	+/-0.0646	0.103	0.500	pCi/g							
Uranium-238		0.997	+/-0.245	0.111	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.167	+/-2.41	4.20	5.00	pCi/g			JJ3	01/14/20	1005	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			95.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-25+26-8	Project: WNUC01519
Sample ID: 497105018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:00	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.15%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.622	+/-0.214	0.152	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236	U	0.0322	+/-0.0739	0.117	0.500	pCi/g							
Uranium-238		0.494	+/-0.192	0.144	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.22	+/-2.43	4.33	5.00	pCi/g			JJ3	01/14/20	1022	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-1	Project: WNUC01519
Sample ID: 497105019	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:10	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.09	+/-0.398	0.166	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236		0.0938	+/-0.103	0.0703	0.500	pCi/g							
Uranium-238		0.958	+/-0.268	0.105	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.05	+/-2.43	4.32	5.00	pCi/g			JJ3	01/14/20	1038	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-2	Project: WNUC01519
Sample ID: 497105020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:15	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 16.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.35	+/-0.475	0.172	0.500	pCi/g			EXC2	11/26/19	1037	1941441	1
Uranium-235/236	U	0.0801	+/-0.104	0.148	0.500	pCi/g							
Uranium-238		1.90	+/-0.356	0.104	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.98	+/-2.24	4.07	5.00	pCi/g			JJ3	01/15/20	0555	1957084	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1446	1941263

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-3	Project:	WNUC01519
Sample ID:	497105021	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:18		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	16.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		4.32	+/-0.553	0.131	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.265	+/-0.160	0.108	0.500	pCi/g							
Uranium-238		1.65	+/-0.344	0.112	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.650	+/-2.15	3.79	5.00	pCi/g			JJ3	01/14/20	0540	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			102	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-65-4	Project: WNUC01519
Sample ID: 497105022	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:20	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		15.5	+/-1.04	0.143	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.773	+/-0.264	0.124	0.500	pCi/g							
Uranium-238		4.79	+/-0.580	0.127	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.27	+/-2.06	3.68	5.00	pCi/g			JJ3	01/14/20	0557	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			105	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-65-5	Project:	WNUC01519
Sample ID:	497105023	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	13-NOV-19 14:24		
Receive Date:	20-NOV-19		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		9.85	+/-0.764	0.107	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.608	+/-0.214	0.0570	0.500	pCi/g							
Uranium-238		2.88	+/-0.415	0.0852	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.00	+/-1.89	3.37	5.00	pCi/g			JJ3	01/14/20	0613	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			82.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			103	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-1	Project: WNUC01519
Sample ID: 497105024	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:50	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.26	+/-0.267	0.111	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.228	+/-0.129	0.0525	0.500	pCi/g							
Uranium-238		1.10	+/-0.247	0.0679	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.265	+/-2.04	3.57	5.00	pCi/g			JJ3	01/14/20	0630	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-2	Project: WNUC01519
Sample ID: 497105025	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 14:53	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.685	+/-0.215	0.120	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.102	+/-0.0985	0.0612	0.500	pCi/g							
Uranium-238		0.942	+/-0.249	0.109	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.581	+/-1.98	3.50	5.00	pCi/g			JJ3	01/14/20	0646	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-3	Project: WNUC01519
Sample ID: 497105026	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:00	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.23	+/-0.308	0.150	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.154	+/-0.132	0.131	0.500	pCi/g							
Uranium-238		0.522	+/-0.203	0.117	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.44	+/-2.17	3.89	5.00	pCi/g			JJ3	01/14/20	0703	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			71.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-4	Project: WNUC01519
Sample ID: 497105027	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:04	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.40	+/-0.281	0.106	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.195	+/-0.121	0.0532	0.500	pCi/g							
Uranium-238		0.796	+/-0.213	0.0794	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.207	+/-2.16	3.79	5.00	pCi/g			JJ3	01/14/20	0719	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-46-5	Project: WNUC01519
Sample ID: 497105028	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:09	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.07	+/-0.258	0.108	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	0.0826	+/-0.0944	0.118	0.500	pCi/g							
Uranium-238		0.785	+/-0.221	0.0954	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.382	+/-2.16	3.74	5.00	pCi/g			JJ3	01/14/20	0736	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-1	Project: WNUC01519
Sample ID: 497105029	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:07	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 15%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.31	+/-0.282	0.113	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	0.0902	+/-0.0918	0.0908	0.500	pCi/g							
Uranium-238		0.851	+/-0.227	0.0849	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.802	+/-2.00	3.55	5.00	pCi/g			JJ3	01/14/20	0753	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			76.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			103	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-2	Project: WNUC01519
Sample ID: 497105030	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:13	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 14%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.54	+/-0.318	0.132	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	0.0514	+/-0.0817	0.113	0.500	pCi/g							
Uranium-238		0.901	+/-0.245	0.122	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-3.00	+/-2.18	4.03	5.00	pCi/g			JJ3	01/14/20	0809	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			71.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.9	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-3	Project: WNUC01519
Sample ID: 497105031	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:18	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.49	+/-0.295	0.114	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	-0.00437	+/-0.0377	0.0873	0.500	pCi/g							
Uranium-238		0.830	+/-0.223	0.114	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.24	+/-2.07	3.71	5.00	pCi/g			JJ3	01/14/20	0826	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			82.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.5	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-4	Project: WNUC01519
Sample ID: 497105032	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:25	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.22%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.50	+/-0.368	0.104	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.241	+/-0.136	0.113	0.500	pCi/g							
Uranium-238		1.85	+/-0.318	0.108	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.172	+/-2.13	3.70	5.00	pCi/g			JJ3	01/14/20	0851	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-5	Project: WNUC01519
Sample ID: 497105033	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:31	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Rad Alpha Spec Analysis

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		1.07	+/-0.238	0.104	0.500	pCi/g		MP2	11/26/19	1354	1941443		1
Uranium-235/236		0.0655	+/-0.0722	0.0491	0.500	pCi/g							
Uranium-238		0.696	+/-0.191	0.0734	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-0.946	+/-2.13	3.78	5.00	pCi/g		JJ3	01/14/20	0907	1957085		2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.8	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-35-6	Project: WNUC01519
Sample ID: 497105034	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:36	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.05	+/-0.242	0.0937	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	0.0612	+/-0.0775	0.0963	0.500	pCi/g							
Uranium-238		0.686	+/-0.195	0.0675	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.06	+/-2.07	3.76	5.00	pCi/g			JJ3	01/14/20	0924	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.8	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-1	Project: WNUC01519
Sample ID: 497105035	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:30	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.36	+/-0.406	0.117	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.245	+/-0.126	0.0746	0.500	pCi/g							
Uranium-238		0.982	+/-0.221	0.0829	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.00	+/-2.02	3.60	5.00	pCi/g			JJ3	01/14/20	0940	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			82.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.9	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-2 Project: WNUC01519
Sample ID: 497105036 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:34
Receive Date: 20-NOV-19
Collector: Client
Moisture: 12.4%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.02	+/-0.408	0.114	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.227	+/-0.128	0.0523	0.500	pCi/g							
Uranium-238		1.32	+/-0.270	0.0677	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.850	+/-2.17	3.84	5.00	pCi/g			JJ3	01/14/20	0957	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-3 Project: WNUC01519
Sample ID: 497105037 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:37
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.4%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.55	+/-0.326	0.119	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236	U	0.0594	+/-0.0856	0.103	0.500	pCi/g							
Uranium-238		1.22	+/-0.290	0.106	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-0.317	+/-2.24	3.92	5.00	pCi/g			JJ3	01/14/20	1013	1957085	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			65.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-4 Project: WNUC01519
Sample ID: 497105038 Client ID: WNUC009
Matrix: Soil
Collect Date: 13-NOV-19 15:42
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.6%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.84	+/-0.307	0.0885	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		0.142	+/-0.101	0.0778	0.500	pCi/g							
Uranium-238		0.942	+/-0.220	0.0630	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.40	+/-2.16	3.86	5.00	pCi/g			JJ3	01/14/20	1030	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.6	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-5	Project: WNUC01519
Sample ID: 497105039	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:45	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Rad Alpha Spec Analysis

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		3.21	+/-0.445	0.131	0.500	pCi/g		MP2	11/26/19	1354	1941443		1
Uranium-235/236		0.112	+/-0.102	0.0935	0.500	pCi/g							
Uranium-238		1.27	+/-0.280	0.0757	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-1.29	+/-2.30	4.11	5.00	pCi/g		JJ3	01/14/20	1046	1957085		2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.8	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-44-6	Project: WNUC01519
Sample ID: 497105040	Client ID: WNUC009
Matrix: Soil	
Collect Date: 13-NOV-19 15:49	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		38.5	+/-1.46	0.101	0.500	pCi/g			MP2	11/26/19	1354	1941443	1
Uranium-235/236		1.92	+/-0.364	0.0534	0.500	pCi/g							
Uranium-238		6.07	+/-0.580	0.0432	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.32	+/-2.30	4.12	5.00	pCi/g			JJ3	01/14/20	1103	1957085	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1501	1941264

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			89	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-1	Project: WNUC01519
Sample ID: 497105041	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 08:45	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.18	+/-0.242	0.106	0.500	pCi/g			BXA4	11/25/19	2323	1941446	1
Uranium-235/236		0.146	+/-0.100	0.0848	0.500	pCi/g							
Uranium-238		0.814	+/-0.199	0.0594	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.30	+/-1.71	3.06	5.00	pCi/g			JJ3	01/14/20	0438	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			94.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.6	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-2	Project: WNUC01519
Sample ID: 497105042	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 08:50	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 13.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.917	+/-0.227	0.104	0.500	pCi/g			BXA4	11/26/19	0458	1941446	1
Uranium-235/236	U	0.0305	+/-0.0600	0.0832	0.500	pCi/g							
Uranium-238		0.523	+/-0.172	0.0857	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.513	+/-1.72	2.95	5.00	pCi/g			JJ3	01/14/20	0500	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			95	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			104	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-32-3 Project: WNUC01519
Sample ID: 497105043 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 08:54
Receive Date: 20-NOV-19
Collector: Client
Moisture: 11.7%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.33	+/-0.279	0.118	0.500	pCi/g			BXA4	11/26/19	0458	1941446	1
Uranium-235/236		0.118	+/-0.101	0.100	0.500	pCi/g							
Uranium-238		0.832	+/-0.221	0.103	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.55	+/-2.03	3.63	5.00	pCi/g			JJ3	01/14/20	0521	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			91.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-4	Project: WNUC01519
Sample ID: 497105044	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 08:59	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.21	+/-0.257	0.0976	0.500	pCi/g			BXA4	11/26/19	0458	1941446	1
Uranium-235/236		0.102	+/-0.0883	0.0509	0.500	pCi/g							
Uranium-238		0.858	+/-0.215	0.0760	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.342	+/-1.67	2.87	5.00	pCi/g			JJ3	01/14/20	0542	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			102	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-5	Project: WNUC01519
Sample ID: 497105045	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:02	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.10	+/-0.223	0.0908	0.500	pCi/g			BXA4	11/26/19	0458	1941446	1
Uranium-235/236		0.0837	+/-0.0726	0.0418	0.500	pCi/g							
Uranium-238		0.855	+/-0.194	0.0541	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.207	+/-1.80	3.15	5.00	pCi/g			JJ3	01/14/20	0604	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			96.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-6	Project: WNUC01519
Sample ID: 497105046	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:06	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Rad Alpha Spec Analysis

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		0.890	+/-0.222	0.103	0.500	pCi/g			BXA4	11/26/19	0458	1941446	1
Uranium-235/236		0.0684	+/-0.0753	0.0513	0.500	pCi/g							
Uranium-238		0.512	+/-0.170	0.0911	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	0.321	+/-1.83	3.16	5.00	pCi/g			JJ3	01/14/20	0625	1957086	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-7	Project: WNUC01519
Sample ID: 497105047	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:14	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.24	+/-0.277	0.123	0.500	pCi/g			BXA4	11/26/19	0459	1941446	1
Uranium-235/236		0.0950	+/-0.0916	0.0570	0.500	pCi/g							
Uranium-238		0.688	+/-0.205	0.0737	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	2.87	+/-1.80	2.94	5.00	pCi/g			JJ3	01/14/20	0646	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			79.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-8	Project: WNUC01519
Sample ID: 497105048	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:19	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 11%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.52	+/-0.296	0.102	0.500	pCi/g			BXA4	11/26/19	0459	1941446	1
Uranium-235/236	U	0.0317	+/-0.0623	0.0863	0.500	pCi/g							
Uranium-238		0.761	+/-0.210	0.0890	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.35	+/-1.79	3.20	5.00	pCi/g			JJ3	01/14/20	0708	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			79.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-9	Project: WNUC01519
Sample ID: 497105049	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:22	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 9.86%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.59	+/-0.273	0.0825	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236		0.130	+/-0.0922	0.0709	0.500	pCi/g							
Uranium-238		0.966	+/-0.213	0.0574	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.287	+/-1.83	3.17	5.00	pCi/g			JJ3	01/14/20	0729	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-10	Project: WNUC01519
Sample ID: 497105050	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:28	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.82	+/-0.292	0.102	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236		0.144	+/-0.0962	0.0706	0.500	pCi/g							
Uranium-238		0.831	+/-0.197	0.0571	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.446	+/-1.86	3.20	5.00	pCi/g			JJ3	01/14/20	0750	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			96	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-11	Project: WNUC01519
Sample ID: 497105051	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:34	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.39	+/-0.424	0.0971	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236		0.135	+/-0.0996	0.0506	0.500	pCi/g							
Uranium-238		0.969	+/-0.227	0.0410	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.0945	+/-1.84	3.20	5.00	pCi/g			JJ3	01/14/20	0812	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			94.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-29-12	Project: WNUC01519
Sample ID: 497105052	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:39	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.84	+/-0.372	0.0949	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236		0.0928	+/-0.0805	0.0464	0.500	pCi/g							
Uranium-238		1.26	+/-0.248	0.0600	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.609	+/-1.74	3.07	5.00	pCi/g			JJ3	01/14/20	0833	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.1	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-13	Project: WNUC01519
Sample ID: 497105053	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:46	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.49	+/-0.274	0.0969	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236	U	0.0436	+/-0.0629	0.0758	0.500	pCi/g							
Uranium-238		0.797	+/-0.201	0.0781	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.329	+/-1.92	3.36	5.00	pCi/g			JJ3	01/14/20	0855	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			95.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-14	Project: WNUC01519
Sample ID: 497105054	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:50	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.96	+/-0.319	0.111	0.500	pCi/g			BXA4	11/26/19	0501	1941446	1
Uranium-235/236		0.138	+/-0.101	0.0898	0.500	pCi/g							
Uranium-238		1.20	+/-0.248	0.0629	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.757	+/-1.98	3.50	5.00	pCi/g			JJ3	01/14/20	0916	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			89.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-15	Project: WNUC01519
Sample ID: 497105055	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:53	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.31	+/-0.403	0.0958	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236		0.262	+/-0.130	0.0749	0.500	pCi/g							
Uranium-238		1.23	+/-0.247	0.0772	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.158	+/-1.88	3.28	5.00	pCi/g			JJ3	01/14/20	0937	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			107	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.9	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-16	Project: WNUC01519
Sample ID: 497105056	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:52	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.27	+/-0.278	0.123	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236	U	0.0854	+/-0.0920	0.105	0.500	pCi/g							
Uranium-238		1.08	+/-0.257	0.107	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.415	+/-1.87	3.28	5.00	pCi/g			JJ3	01/14/20	0959	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.9	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-31-17	Project: WNUC01519
Sample ID: 497105057	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 09:56	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 12.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.19	+/-0.241	0.0893	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236	U	0.0306	+/-0.0524	0.0458	0.500	pCi/g							
Uranium-238		0.835	+/-0.201	0.0684	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.711	+/-1.99	3.51	5.00	pCi/g			JJ3	01/14/20	1020	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			101	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-30-18 Project: WNUC01519
Sample ID: 497105058 Client ID: WNUC009
Matrix: Soil
Collect Date: 14-NOV-19 10:02
Receive Date: 20-NOV-19
Collector: Client
Moisture: 10.8%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.44	+/-0.327	0.0903	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236		0.125	+/-0.0862	0.0416	0.500	pCi/g							
Uranium-238		1.22	+/-0.231	0.0538	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.0993	+/-1.80	3.13	5.00	pCi/g			JJ3	01/14/20	1042	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-19	Project: WNUC01519
Sample ID: 497105059	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 10:05	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 8.15%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.18	+/-0.365	0.114	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236	U	0.0384	+/-0.0658	0.0576	0.500	pCi/g							
Uranium-238		0.887	+/-0.235	0.102	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.0740	+/-1.88	3.27	5.00	pCi/g			JJ3	01/14/20	1103	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.2	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: January 16, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-28-20	Project: WNUC01519
Sample ID: 497105060	Client ID: WNUC009
Matrix: Soil	
Collect Date: 14-NOV-19 10:10	
Receive Date: 20-NOV-19	
Collector: Client	
Moisture: 10.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		9.14	+/-0.667	0.0954	0.500	pCi/g			BXA4	11/26/19	0935	1941446	1
Uranium-235/236		0.672	+/-0.206	0.103	0.500	pCi/g							
Uranium-238		2.11	+/-0.323	0.0978	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.565	+/-1.92	3.30	5.00	pCi/g			JJ3	01/14/20	1124	1957086	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	11/21/19	1436	1941267

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.3	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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QC Summary

Report Date: January 16, 2020

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Westinghouse Electric Company, LLC
 PO Drawer R
 Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497105

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1941739										
QC1204438914	497105001	DUP									
Fluoride		U	ND	U	ND	mg/kg	N/A		LXA2	11/23/19	03:12
QC1204438913	LCS										
Fluoride	24.6				25.9	mg/kg	105	(90%-110%)		11/23/19	02:12
QC1204438912	MB										
Fluoride			U		ND	mg/kg				11/23/19	01:42
QC1204438915	497105001	MS									
Fluoride	28.3	U	ND		5.95	mg/kg	21 *	(75%-125%)		11/23/19	03:42
Batch	1941873										
QC1204439223	497105011	DUP									
Fluoride		U	ND	U	ND	mg/kg	N/A		CH5	11/23/19	01:41
QC1204439222	LCS										
Fluoride	25.1				26.7	mg/kg	106	(90%-110%)		11/23/19	00:41
QC1204439221	MB										
Fluoride			U		ND	mg/kg				11/23/19	00:12
QC1204439224	497105011	MS									
Fluoride	28.4	U	ND		2.82	mg/kg	9.93 *	(75%-125%)		11/23/19	02:11
Batch	1941879										
QC1204439238	497105021	DUP									
Fluoride		J	0.890	J	0.722	mg/kg	20.9 ^	(+/-1.19)	LXA2	11/23/19	01:51
QC1204439237	LCS										
Fluoride	25.3				27.7	mg/kg	109	(90%-110%)		11/23/19	00:51

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1941879										
QC1204439236		MB									
Fluoride			U	ND	mg/kg				LXA2	11/23/19	00:22
QC1204439239	497105021	MS									
Fluoride	29.3	J	0.890	9.56	mg/kg		29.6*	(75%-125%)		11/23/19	02:21
Batch	1941889										
QC1204439242	497105031	DUP									
Fluoride			1.59	1.71	mg/kg	6.86 ^		(+/-1.12)	CH5	11/23/19	10:38
QC1204439241	LCS										
Fluoride	24.6			25.9	mg/kg		105	(90%-110%)		11/23/19	09:38
QC1204439240	MB										
Fluoride			U	ND	mg/kg					11/23/19	09:08
QC1204439243	497105031	MS									
Fluoride	27.9		1.59	12.4	mg/kg		38.7*	(75%-125%)		11/23/19	11:08
Batch	1941949										
QC1204439400	497105036	DUP									
Fluoride		U	ND	U	ND	mg/kg	N/A		JLD1	11/23/19	01:43
QC1204439399	LCS										
Fluoride	25.1			26.9	mg/kg		107	(90%-110%)		11/23/19	00:43
QC1204439398	MB										
Fluoride			U	ND	mg/kg					11/23/19	00:13
QC1204439401	497105036	MS									
Fluoride	28.5	U	ND	8.07	mg/kg		28.3*	(75%-125%)		11/23/19	02:13

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1941989										
QC1204439559	497105046	DUP									
Fluoride	J	1.01	J	1.01	mg/kg	0.472 ^		(+/-1.13)	JLD1	11/23/19	22:01
QC1204439558	LCS										
Fluoride	25.1			25.7	mg/kg		102	(90%-110%)		11/23/19	21:30
QC1204439557	MB										
Fluoride			U	ND	mg/kg					11/23/19	20:59
QC1204439560	497105046	MS									
Fluoride	2.50 J	1.01		11.8	mg/kg		38.2*	(75%-125%)		11/23/19	22:32
Batch	1942419										
QC1204440512	497105057	DUP									
Fluoride		1.66	J	1.10	mg/kg	41.1 ^		(+/-1.14)	CH5	11/23/19	16:36
QC1204440511	LCS										
Fluoride	24.3			25.4	mg/kg		105	(90%-110%)		11/23/19	15:36
QC1204440510	MB										
Fluoride			U	ND	mg/kg					11/23/19	15:06
QC1204440513	497105057	MS									
Fluoride	29.4	1.66		15.3	mg/kg		46.4*	(75%-125%)		11/23/19	17:06
Metals Analysis - ICPMS											
Batch	1941291										
QC1204437858	LCS										
Uranium-235	35.9			36.4	ug/kg		102	(80%-120%)	PRB	11/30/19	18:42
Uranium-238	4940			4910	ug/kg		99.3	(80%-120%)			
QC1204437874	LCS										
Uranium-234	54.0			63.1	ug/kg		117	(80%-120%)		12/02/19	16:27

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1941291										
QC1204437857		MB									
Uranium-234			U	ND	ug/kg				PRB	12/02/19	16:25
Uranium-235			U	ND	ug/kg					11/30/19	18:41
Uranium-238				22.4	ug/kg						
QC1204437859	497105001	MS									
Uranium-235	37.7		57.0	95.1	ug/kg		101	(75%-125%)		11/30/19	18:46
Uranium-238	5200		2660	9140	ug/kg		125	(75%-125%)			
QC1204437875	497105001	MS									
Uranium-234	58.5	U	ND	73.4	ug/kg		124	(75%-125%)		12/02/19	16:31
QC1204437860	497105001	MSD									
Uranium-235	38.2		57.0	105	ug/kg	9.49	125	(0%-20%)		11/30/19	18:47
Uranium-238	5260		2660	8570	ug/kg	6.38	112	(0%-20%)			
QC1204437876	497105001	MSD									
Uranium-234	60.6	U	ND	67.6	ug/kg	8.27	111	(0%-20%)		12/02/19	16:33
QC1204437861	497105001	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/02/19	16:35
Uranium-235			0.261	J	0.0497	ug/L	4.86	(0%-20%)		11/30/19	18:51
Uranium-238			12.2		2.29	ug/L	5.93	(0%-20%)			
Batch	1941293										
QC1204437863		LCS									
Uranium-235	36.0			36.4	ug/kg		101	(80%-120%)	PRB	11/30/19	16:11

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1941293										
Uranium-238	4960			4970	ug/kg		100	(80%-120%)	PRB	11/30/19	16:11
QC1204437877	LCS										
Uranium-234	52.6			54.3	ug/kg		103	(80%-120%)		12/02/19	14:18
QC1204437862	MB										
Uranium-234			U	ND	ug/kg					12/02/19	14:16
Uranium-235			U	ND	ug/kg					11/30/19	16:09
Uranium-238			U	ND	ug/kg						
QC1204437864	497105021 MS										
Uranium-235	41.3	139		262	ug/kg		298*	(75%-125%)		11/30/19	16:15
Uranium-238	5700	6310		15300	ug/kg		158*	(75%-125%)			
QC1204437878	497105021 MS										
Uranium-234	62.9	U	ND	68.1	ug/kg		107	(75%-125%)		12/02/19	14:22
QC1204437865	497105021 MSD										
Uranium-235	42.0	139		320	ug/kg	19.9	431*	(0%-20%)		11/30/19	16:17
Uranium-238	5780	6310		18700	ug/kg	19.6	213*	(0%-20%)			
QC1204437879	497105021 MSD										
Uranium-234	64.9	U	ND	74.1	ug/kg	8.33	112	(0%-20%)		12/02/19	14:24
QC1204444464	497105021 PS										
Uranium-235	0.180	0.610		0.822	ug/L		118	(75%-125%)		11/30/19	16:19
Uranium-238	24.8	27.6		53.5	ug/L		104	(75%-125%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1941293										
QC1204437866	497105021	SDILT									
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)	PRB	12/02/19	14:26
Uranium-235		0.610		0.113	ug/L	7.69		(0%-20%)		11/30/19	16:20
Uranium-238		27.6		5.24	ug/L	5.07		(0%-20%)			
Batch	1941295										
QC1204437868	LCS										
Uranium-235		35.7		34.9	ug/kg		97.7	(80%-120%)	PRB	11/30/19	17:37
Uranium-238		4920		4790	ug/kg		97.2	(80%-120%)			
QC1204437880	LCS										
Uranium-234		54.9		59.3	ug/kg		108	(80%-120%)		12/02/19	15:24
QC1204437867	MB										
Uranium-234			U	ND	ug/kg					12/02/19	15:22
Uranium-235			U	ND	ug/kg					11/30/19	17:35
Uranium-238			U	ND	ug/kg						
QC1204437869	497105041	MS									
Uranium-235	38.4	J	12.4	50.7	ug/kg		99.8	(75%-125%)		11/30/19	17:40
Uranium-238	5300		1080	6440	ug/kg		101	(75%-125%)			
QC1204437881	497105041	MS									
Uranium-234	57.6	U	ND	59.7	ug/kg		103	(75%-125%)		12/02/19	15:28
QC1204437870	497105041	MSD									
Uranium-235	39.5	J	12.4	55.1	ug/kg	8.24	108	(0%-20%)		11/30/19	17:42

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1941295										
Uranium-238	5450	1080		6980	ug/kg	8.07	108	(0%-20%)	PRB	11/30/19	17:42
QC1204437882	497105041	MSD									
Uranium-234	56.8	U	ND	60.6	ug/kg	1.48	106	(0%-20%)		12/02/19	15:30
QC1204437871	497105041	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/02/19	15:32
Uranium-235		J	0.0603	J	0.0133	ug/L	10.3	(0%-20%)		11/30/19	17:45
Uranium-238			5.27		1.05	ug/L	.473	(0%-20%)			
Volatile-GC/MS											
Batch	1942304										
QC1204440243	LCS										
1,1,1-Trichloroethane	50.0			51.1	ug/kg		102	(70%-130%)	MXL2	11/22/19	12:18
1,1,2,2-Tetrachloroethane	50.0			47.4	ug/kg		95	(70%-130%)			
1,1,2-Trichloroethane	50.0			47.5	ug/kg		95	(70%-130%)			
1,1-Dichloroethane	50.0			51.4	ug/kg		103	(70%-130%)			
1,1-Dichloroethylene	50.0			49.8	ug/kg		100	(70%-130%)			
1,2,3-Trichlorobenzene	50.0			44.4	ug/kg		89	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			46.6	ug/kg		93	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0			45.0	ug/kg		90	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
1,2-Dibromoethane	50.0			50.2	ug/kg		100	(70%-130%)	MXL2	11/22/19	12:18
1,2-Dichlorobenzene	50.0			45.6	ug/kg		91	(70%-130%)			
1,2-Dichloroethane	50.0			46.4	ug/kg		93	(70%-130%)			
1,2-Dichloropropane	50.0			48.7	ug/kg		97	(70%-130%)			
1,3-Dichlorobenzene	50.0			47.1	ug/kg		94	(70%-130%)			
1,4-Dichlorobenzene	50.0			47.4	ug/kg		95	(70%-130%)			
2-Butanone	250			227	ug/kg		91	(70%-130%)			
2-Hexanone	250			230	ug/kg		92	(70%-130%)			
4-Methyl-2-pentanone	250			237	ug/kg		95	(70%-130%)			
Acetone	250			231	ug/kg		92	(70%-130%)			
Benzene	50.0			50.3	ug/kg		101	(70%-130%)			
Bromochloromethane	50.0			50.2	ug/kg		100	(70%-130%)			
Bromodichloromethane	50.0			53.4	ug/kg		107	(70%-130%)			
Bromoform	50.0			47.8	ug/kg		96	(70%-130%)			
Bromomethane	50.0			44.7	ug/kg		89	(70%-130%)			

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QC Summary

Workorder: 497105

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Carbon disulfide	250			265	ug/kg		106	(70%-130%)	MXL2	11/22/19	12:18
Carbon tetrachloride	50.0			51.1	ug/kg		102	(70%-130%)			
Chlorobenzene	50.0			47.5	ug/kg		95	(70%-130%)			
Chloroethane	50.0			48.6	ug/kg		97	(70%-130%)			
Chloroform	50.0			49.8	ug/kg		100	(70%-130%)			
Chloromethane	50.0			46.5	ug/kg		93	(70%-130%)			
Cyclohexane	50.0			46.1	ug/kg		92	(70%-130%)			
Dibromochloromethane	50.0			53.5	ug/kg		107	(70%-130%)			
Dichlorodifluoromethane	50.0			55.0	ug/kg		110	(70%-130%)			
Ethylbenzene	50.0			47.1	ug/kg		94	(70%-130%)			
Isopropylbenzene	50.0			48.6	ug/kg		97	(70%-130%)			
Methyl acetate	250			242	ug/kg		97	(70%-130%)			
Methylcyclohexane	50.0			44.7	ug/kg		89	(70%-130%)			
Methylene chloride	50.0			45.3	ug/kg		91	(70%-130%)			
Styrene	50.0			50.7	ug/kg		101	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Tetrachloroethylene	50.0			50.0	ug/kg		100	(70%-130%)	MXL2	11/22/19	12:18
Toluene	50.0			47.2	ug/kg		94	(70%-130%)			
Trichloroethylene	50.0			48.4	ug/kg		97	(70%-130%)			
Trichlorofluoromethane	50.0			47.4	ug/kg		95	(70%-130%)			
Vinyl chloride	50.0			49.7	ug/kg		99	(70%-130%)			
cis-1,2-Dichloroethylene	50.0			49.3	ug/kg		99	(70%-130%)			
cis-1,3-Dichloropropylene	50.0			56.1	ug/kg		112	(70%-130%)			
m,p-Xylenes	100			96.1	ug/kg		96	(70%-130%)			
o-Xylene	50.0			47.0	ug/kg		94	(70%-130%)			
tert-Butyl methyl ether	50.0			45.5	ug/kg		91	(70%-130%)			
trans-1,2-Dichloroethylene	50.0			50.5	ug/kg		101	(70%-130%)			
trans-1,3-Dichloropropylene	50.0			52.8	ug/kg		106	(70%-130%)			
**1,2-Dichloroethane-d4	50.0			49.5	ug/L		99	(81%-124%)			
**Bromofluorobenzene	50.0			50.3	ug/L		101	(70%-130%)			
**Toluene-d8	50.0			49.4	ug/L		99	(81%-120%)			

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Volatile-GC/MS											
Batch	1942304										
QC1204442787	LCS										
1,1,1-Trichloroethane	50.0			50.4	ug/kg		101	(70%-130%)	MXL2	11/24/19	13:13
1,1,2,2-Tetrachloroethane	50.0			52.3	ug/kg		105	(70%-130%)			
1,1,2-Trichloroethane	50.0			48.8	ug/kg		98	(70%-130%)			
1,1-Dichloroethane	50.0			49.0	ug/kg		98	(70%-130%)			
1,1-Dichloroethylene	50.0			50.4	ug/kg		101	(70%-130%)			
1,2,3-Trichlorobenzene	50.0			49.7	ug/kg		99	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			48.5	ug/kg		97	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0			49.7	ug/kg		99	(70%-130%)			
1,2-Dibromoethane	50.0			48.3	ug/kg		97	(70%-130%)			
1,2-Dichlorobenzene	50.0			47.9	ug/kg		96	(70%-130%)			
1,2-Dichloroethane	50.0			47.7	ug/kg		95	(70%-130%)			
1,2-Dichloropropane	50.0			49.8	ug/kg		100	(70%-130%)			
1,3-Dichlorobenzene	50.0			48.6	ug/kg		97	(70%-130%)			
1,4-Dichlorobenzene	50.0			47.5	ug/kg		95	(70%-130%)			
2-Butanone	250			236	ug/kg		94	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
2-Hexanone	250			272	ug/kg		109	(70%-130%)	MXL2	11/24/19	13:13
4-Methyl-2-pentanone	250			268	ug/kg		107	(70%-130%)			
Acetone	250			283	ug/kg		113	(70%-130%)			
Benzene	50.0			47.1	ug/kg		94	(70%-130%)			
Bromochloromethane	50.0			48.3	ug/kg		97	(70%-130%)			
Bromodichloromethane	50.0			49.9	ug/kg		100	(70%-130%)			
Bromoform	50.0			54.6	ug/kg		109	(70%-130%)			
Bromomethane	50.0			49.3	ug/kg		99	(70%-130%)			
Carbon disulfide	250			264	ug/kg		106	(70%-130%)			
Carbon tetrachloride	50.0			51.1	ug/kg		102	(70%-130%)			
Chlorobenzene	50.0			47.7	ug/kg		95	(70%-130%)			
Chloroethane	50.0			51.2	ug/kg		102	(70%-130%)			
Chloroform	50.0			48.3	ug/kg		97	(70%-130%)			
Chloromethane	50.0			58.5	ug/kg		117	(70%-130%)			
Cyclohexane	50.0			53.0	ug/kg		106	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Dibromochloromethane	50.0			52.2	ug/kg		104	(70%-130%)	MXL2	11/24/19	13:13
Dichlorodifluoromethane	50.0			49.8	ug/kg		100	(70%-130%)			
Ethylbenzene	50.0			49.3	ug/kg		99	(70%-130%)			
Isopropylbenzene	50.0			51.1	ug/kg		102	(70%-130%)			
Methyl acetate	250			234	ug/kg		94	(70%-130%)			
Methylcyclohexane	50.0			51.1	ug/kg		102	(70%-130%)			
Methylene chloride	50.0			50.0	ug/kg		100	(70%-130%)			
Styrene	50.0			48.5	ug/kg		97	(70%-130%)			
Tetrachloroethylene	50.0			46.4	ug/kg		93	(70%-130%)			
Toluene	50.0			48.7	ug/kg		97	(70%-130%)			
Trichloroethylene	50.0			47.5	ug/kg		95	(70%-130%)			
Trichlorofluoromethane	50.0			53.4	ug/kg		107	(70%-130%)			
Vinyl chloride	50.0			62.8	ug/kg		126	(70%-130%)			
cis-1,2-Dichloroethylene	50.0			47.8	ug/kg		96	(70%-130%)			
cis-1,3-Dichloropropylene	50.0			48.9	ug/kg		98	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
m,p-Xylenes	100			98.4	ug/kg		98	(70%-130%)	MXL2	11/24/19	13:13
o-Xylene	50.0			49.7	ug/kg		99	(70%-130%)			
tert-Butyl methyl ether	50.0			49.4	ug/kg		99	(70%-130%)			
trans-1,2-Dichloroethylene	50.0			50.6	ug/kg		101	(70%-130%)			
trans-1,3-Dichloropropylene	50.0			51.3	ug/kg		103	(70%-130%)			
**1,2-Dichloroethane-d4	50.0			50.2	ug/L		100	(81%-124%)			
**Bromofluorobenzene	50.0			51.5	ug/L		103	(70%-130%)			
**Toluene-d8	50.0			51.5	ug/L		103	(81%-120%)			
QC1204442788 LCS											
1,1,1-Trichloroethane	50.0			44.8	ug/kg		90	(70%-130%)		11/26/19	08:49
1,1,2,2-Tetrachloroethane	50.0			49.2	ug/kg		98	(70%-130%)			
1,1,2-Trichloroethane	50.0			46.1	ug/kg		92	(70%-130%)			
1,1-Dichloroethane	50.0			43.3	ug/kg		87	(70%-130%)			
1,1-Dichloroethylene	50.0			43.6	ug/kg		87	(70%-130%)			
1,2,3-Trichlorobenzene	50.0			46.5	ug/kg		93	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			45.7	ug/kg		91	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
1,2-Dibromo-3-chloropropane	50.0			51.7	ug/kg		103	(70%-130%)	MXL2	11/26/19	08:49
1,2-Dibromoethane	50.0			46.9	ug/kg		94	(70%-130%)			
1,2-Dichlorobenzene	50.0			43.6	ug/kg		87	(70%-130%)			
1,2-Dichloroethane	50.0			45.5	ug/kg		91	(70%-130%)			
1,2-Dichloropropane	50.0			44.1	ug/kg		88	(70%-130%)			
1,3-Dichlorobenzene	50.0			44.3	ug/kg		89	(70%-130%)			
1,4-Dichlorobenzene	50.0			44.0	ug/kg		88	(70%-130%)			
2-Butanone	250			252	ug/kg		101	(70%-130%)			
2-Hexanone	250			245	ug/kg		98	(70%-130%)			
4-Methyl-2-pentanone	250			253	ug/kg		101	(70%-130%)			
Acetone	250			282	ug/kg		113	(70%-130%)			
Benzene	50.0			41.7	ug/kg		83	(70%-130%)			
Bromochloromethane	50.0			44.2	ug/kg		88	(70%-130%)			
Bromodichloromethane	50.0			46.6	ug/kg		93	(70%-130%)			
Bromoform	50.0			53.4	ug/kg		107	(70%-130%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Bromomethane	50.0			39.8	ug/kg		80	(70%-130%)	MXL2	11/26/19	08:49
Carbon disulfide	250			223	ug/kg		89	(70%-130%)			
Carbon tetrachloride	50.0			45.7	ug/kg		91	(70%-130%)			
Chlorobenzene	50.0			43.7	ug/kg		87	(70%-130%)			
Chloroethane	50.0			42.9	ug/kg		86	(70%-130%)			
Chloroform	50.0			44.2	ug/kg		88	(70%-130%)			
Chloromethane	50.0			41.0	ug/kg		82	(70%-130%)			
Cyclohexane	50.0			45.0	ug/kg		90	(70%-130%)			
Dibromochloromethane	50.0			49.7	ug/kg		99	(70%-130%)			
Dichlorodifluoromethane	50.0			35.3	ug/kg		71	(70%-130%)			
Ethylbenzene	50.0			43.6	ug/kg		87	(70%-130%)			
Isopropylbenzene	50.0			44.3	ug/kg		89	(70%-130%)			
Methyl acetate	250			229	ug/kg		91	(70%-130%)			
Methylcyclohexane	50.0			43.7	ug/kg		87	(70%-130%)			
Methylene chloride	50.0			43.8	ug/kg		88	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Styrene	50.0			44.3	ug/kg		89	(70%-130%)	MXL2	11/26/19	08:49
Tetrachloroethylene	50.0			41.9	ug/kg		84	(70%-130%)			
Toluene	50.0			43.0	ug/kg		86	(70%-130%)			
Trichloroethylene	50.0			43.1	ug/kg		86	(70%-130%)			
Trichlorofluoromethane	50.0			45.5	ug/kg		91	(70%-130%)			
Vinyl chloride	50.0			46.9	ug/kg		94	(70%-130%)			
cis-1,2-Dichloroethylene	50.0			42.3	ug/kg		85	(70%-130%)			
cis-1,3-Dichloropropylene	50.0			46.2	ug/kg		92	(70%-130%)			
m,p-Xylenes	100			87.3	ug/kg		87	(70%-130%)			
o-Xylene	50.0			43.9	ug/kg		88	(70%-130%)			
tert-Butyl methyl ether	50.0			46.6	ug/kg		93	(70%-130%)			
trans-1,2-Dichloroethylene	50.0			44.6	ug/kg		89	(70%-130%)			
trans-1,3-Dichloropropylene	50.0			50.2	ug/kg		100	(70%-130%)			
**1,2-Dichloroethane-d4	50.0			53.4	ug/L		107	(81%-124%)			
**Bromofluorobenzene	50.0			51.5	ug/L		103	(70%-130%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
**Toluene-d8	50.0			50.9	ug/L		102	(81%-120%)	MXL2	11/26/19	08:49
QC1204440244 LCSD											
1,1,1-Trichloroethane	50.0			51.5	ug/kg	1	103	(0%-20%)		11/22/19	12:45
1,1,2,2-Tetrachloroethane	50.0			49.0	ug/kg	3	98	(0%-20%)			
1,1,2-Trichloroethane	50.0			49.3	ug/kg	4	99	(0%-20%)			
1,1-Dichloroethane	50.0			51.9	ug/kg	1	104	(0%-20%)			
1,1-Dichloroethylene	50.0			50.8	ug/kg	2	102	(0%-20%)			
1,2,3-Trichlorobenzene	50.0			45.5	ug/kg	3	91	(0%-20%)			
1,2,4-Trichlorobenzene	50.0			46.9	ug/kg	1	94	(0%-20%)			
1,2-Dibromo-3-chloropropane	50.0			47.2	ug/kg	5	94	(0%-20%)			
1,2-Dibromoethane	50.0			51.4	ug/kg	2	103	(0%-20%)			
1,2-Dichlorobenzene	50.0			46.4	ug/kg	2	93	(0%-20%)			
1,2-Dichloroethane	50.0			48.0	ug/kg	4	96	(0%-20%)			
1,2-Dichloropropane	50.0			49.6	ug/kg	2	99	(0%-20%)			
1,3-Dichlorobenzene	50.0			47.7	ug/kg	1	95	(0%-20%)			
1,4-Dichlorobenzene	50.0			47.5	ug/kg	0	95	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
2-Butanone	250			239	ug/kg	5	96	(0%-20%)	MXL2	11/22/19	12:45
2-Hexanone	250			239	ug/kg	3	95	(0%-20%)			
4-Methyl-2-pentanone	250			246	ug/kg	4	99	(0%-20%)			
Acetone	250			247	ug/kg	7	99	(0%-20%)			
Benzene	50.0			50.9	ug/kg	1	102	(0%-20%)			
Bromochloromethane	50.0			51.5	ug/kg	3	103	(0%-20%)			
Bromodichloromethane	50.0			54.6	ug/kg	2	109	(0%-20%)			
Bromoform	50.0			49.1	ug/kg	3	98	(0%-20%)			
Bromomethane	50.0			43.0	ug/kg	4	86	(0%-20%)			
Carbon disulfide	250			267	ug/kg	1	107	(0%-20%)			
Carbon tetrachloride	50.0			51.5	ug/kg	1	103	(0%-20%)			
Chlorobenzene	50.0			47.8	ug/kg	1	96	(0%-20%)			
Chloroethane	50.0			45.7	ug/kg	6	91	(0%-20%)			
Chloroform	50.0			50.8	ug/kg	2	102	(0%-20%)			
Chloromethane	50.0			43.6	ug/kg	6	87	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Cyclohexane	50.0			46.0	ug/kg	0	92	(0%-20%)	MXL2	11/22/19	12:45
Dibromochloromethane	50.0			54.9	ug/kg	3	110	(0%-20%)			
Dichlorodifluoromethane	50.0			51.7	ug/kg	6	103	(0%-20%)			
Ethylbenzene	50.0			47.5	ug/kg	1	95	(0%-20%)			
Isopropylbenzene	50.0			48.5	ug/kg	0	97	(0%-20%)			
Methyl acetate	250			254	ug/kg	5	102	(0%-20%)			
Methylcyclohexane	50.0			45.0	ug/kg	1	90	(0%-20%)			
Methylene chloride	50.0			46.8	ug/kg	3	94	(0%-20%)			
Styrene	50.0			51.2	ug/kg	1	102	(0%-20%)			
Tetrachloroethylene	50.0			50.1	ug/kg	0	100	(0%-20%)			
Toluene	50.0			47.7	ug/kg	1	95	(0%-20%)			
Trichloroethylene	50.0			48.9	ug/kg	1	98	(0%-20%)			
Trichlorofluoromethane	50.0			44.7	ug/kg	6	89	(0%-20%)			
Vinyl chloride	50.0			46.8	ug/kg	6	94	(0%-20%)			
cis-1,2-Dichloroethylene	50.0			49.5	ug/kg	0	99	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
cis-1,3-Dichloropropylene	50.0			57.2	ug/kg	2	114	(0%-20%)	MXL2	11/22/19	12:45
m,p-Xylenes	100			97.0	ug/kg	1	97	(0%-20%)			
o-Xylene	50.0			47.3	ug/kg	1	95	(0%-20%)			
tert-Butyl methyl ether	50.0			46.7	ug/kg	2	93	(0%-20%)			
trans-1,2-Dichloroethylene	50.0			51.4	ug/kg	2	103	(0%-20%)			
trans-1,3-Dichloropropylene	50.0			54.1	ug/kg	2	108	(0%-20%)			
**1,2-Dichloroethane-d4	50.0			48.4	ug/L		97	(81%-124%)			
**Bromofluorobenzene	50.0			49.8	ug/L		100	(70%-130%)			
**Toluene-d8	50.0			48.4	ug/L		97	(81%-120%)			
QC1204440242 MB											
1,1,1-Trichloroethane			U	ND	ug/kg					11/22/19	14:07
1,1,2,2-Tetrachloroethane			U	ND	ug/kg						
1,1,2-Trichloroethane			U	ND	ug/kg						
1,1-Dichloroethane			U	ND	ug/kg						
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
1,2,4-Trichlorobenzene			U	ND	ug/kg				MXL2	11/22/19	14:07
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Bromodichloromethane			U	ND	ug/kg				MXL2	11/22/19	14:07
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Methylcyclohexane			U	ND	ug/kg				MXL2	11/22/19	14:07
Methylene chloride			U	ND	ug/kg						
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
cis-1,2-Dichloroethylene			U	ND	ug/kg						
cis-1,3-Dichloropropylene			U	ND	ug/kg						
m,p-Xylenes			U	ND	ug/kg						
o-Xylene			U	ND	ug/kg						
tert-Butyl methyl ether			U	ND	ug/kg						
trans-1,2-Dichloroethylene			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
trans-1,3-Dichloropropylene			U	ND	ug/kg				MXL2	11/22/19	14:07
**1,2-Dichloroethane-d4	50.0			49.1	ug/L		98	(81%-124%)			
**Bromofluorobenzene	50.0			50.0	ug/L		100	(70%-130%)			
**Toluene-d8	50.0			48.8	ug/L		98	(81%-120%)			
QC1204442785 MB											
1,1,1-Trichloroethane			U	ND	ug/kg					11/24/19	14:31
1,1,2,2-Tetrachloroethane			U	ND	ug/kg						
1,1,2-Trichloroethane			U	ND	ug/kg						
1,1-Dichloroethane			U	ND	ug/kg						
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						
1,2,4-Trichlorobenzene			U	ND	ug/kg						
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
1,2-Dichloropropane			U	ND	ug/kg				MXL2	11/24/19	14:31
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Chlorobenzene			U	ND	ug/kg				MXL2	11/24/19	14:31
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						
Methylcyclohexane			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Trichloroethylene			U	ND	ug/kg				MXL2	11/24/19	14:31
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
cis-1,2-Dichloroethylene			U	ND	ug/kg						
cis-1,3-Dichloropropylene			U	ND	ug/kg						
m,p-Xylenes			U	ND	ug/kg						
o-Xylene			U	ND	ug/kg						
tert-Butyl methyl ether			U	ND	ug/kg						
trans-1,2-Dichloroethylene			U	ND	ug/kg						
trans-1,3-Dichloropropylene			U	ND	ug/kg						
**1,2-Dichloroethane-d4	50.0			50.1	ug/L		100	(81%-124%)			
**Bromofluorobenzene	50.0			50.5	ug/L		101	(70%-130%)			
**Toluene-d8	50.0			51.7	ug/L		103	(81%-120%)			
QC1204442786 MB											
1,1,1-Trichloroethane			U	ND	ug/kg					11/26/19	10:35

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
1,1,2,2-Tetrachloroethane			U	ND	ug/kg				MXL2	11/26/19	10:35
1,1,2-Trichloroethane			U	ND	ug/kg						
1,1-Dichloroethane			U	ND	ug/kg						
1,1-Dichloroethylene			U	ND	ug/kg						
1,2,3-Trichlorobenzene			U	ND	ug/kg						
1,2,4-Trichlorobenzene			U	ND	ug/kg						
1,2-Dibromo-3-chloropropane			U	ND	ug/kg						
1,2-Dibromoethane			U	ND	ug/kg						
1,2-Dichlorobenzene			U	ND	ug/kg						
1,2-Dichloroethane			U	ND	ug/kg						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2-Butanone			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
2-Hexanone			U	ND	ug/kg				MXL2	11/26/19	10:35
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromochloromethane			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Cyclohexane			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
Dibromochloromethane			U	ND	ug/kg				MXL2	11/26/19	10:35
Dichlorodifluoromethane			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Isopropylbenzene			U	ND	ug/kg						
Methyl acetate			U	ND	ug/kg						
Methylcyclohexane			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
cis-1,2-Dichloroethylene			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	1942304										
cis-1,3-Dichloropropylene			U	ND	ug/kg				MXL2	11/26/19	10:35
m,p-Xylenes			U	ND	ug/kg						
o-Xylene			U	ND	ug/kg						
tert-Butyl methyl ether			U	ND	ug/kg						
trans-1,2-Dichloroethylene			U	ND	ug/kg						
trans-1,3-Dichloropropylene			U	ND	ug/kg						
**1,2-Dichloroethane-d4	50.0			51.1	ug/L		102	(81%-124%)			
**Bromofluorobenzene	50.0			51.3	ug/L		103	(70%-130%)			
**Toluene-d8	50.0			50.3	ug/L		101	(81%-120%)			

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H		Analytical holding time was exceeded									
J		See case narrative for an explanation									
J		Value is estimated									
JNX		Non Calibrated Compound									
N		Metals--The Matrix spike sample recovery is not within specified control limits									
N		Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor									
N		Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor									
N/A		RPD or %Recovery limits do not apply.									
N1		See case narrative									
ND		Analyte concentration is not detected above the detection limit									
NJ		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
P		Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.									
Q		One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R		Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.									
R		Sample results are rejected									
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UJ		Compound cannot be extracted									
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.									
Y		QC Samples were not spiked with this compound									
Z		Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d		5-day BOD--The 2:1 depletion requirement was not met for this sample									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
h		Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: January 16, 2020

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Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497105

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<hr/>											
Rad Alpha Spec											
Batch		1941441									
QC1204438290		497105001	DUP								
Uranium-233/234		1.60		1.64	pCi/g	2.68		(0%-20%)	EXC2	11/26/19	10:37
	Uncertainty	+/-0.279		+/-0.314							
Uranium-235/236	U	0.0417	U	0.0194	pCi/g	N/A		N/A			
	Uncertainty	+/-0.0601		+/-0.0663							
Uranium-238		0.845		0.963	pCi/g	13		(0%-20%)			
	Uncertainty	+/-0.203		+/-0.241							
QC1204438291		LCS									
Uranium-233/234				5.88	pCi/g					11/26/19	10:37
	Uncertainty			+/-0.629							
Uranium-235/236				0.235	pCi/g						
	Uncertainty			+/-0.146							
Uranium-238	5.20			5.35	pCi/g		103	(75%-125%)			
	Uncertainty			+/-0.598							
QC1204438289		MB									
Uranium-233/234			U	-0.00108	pCi/g					11/26/19	10:37
	Uncertainty			+/-0.0531							
Uranium-235/236			U	-0.0176	pCi/g						
	Uncertainty			+/-0.0407							
Uranium-238			U	-0.0107	pCi/g						
	Uncertainty			+/-0.0322							
<hr/>											
Batch		1941443									
QC1204438296		497105021	DUP								
Uranium-233/234		4.32		3.05	pCi/g	34.4*		(0%-20%)	MP2	11/26/19	13:54
	Uncertainty	+/-0.553		+/-0.433							
Uranium-235/236		0.265		0.346	pCi/g	26.4		(0% - 100%)			
	Uncertainty	+/-0.160		+/-0.167							
Uranium-238		1.65		1.31	pCi/g	22.6*		(0%-20%)			
	Uncertainty	+/-0.344		+/-0.285							

GEL LABORATORIES LLC

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QC Summary

Workorder: 497105

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1941443										
QC1204438297	LCS										
Uranium-233/234				4.76	pCi/g				MP2	11/26/19	13:54
	Uncertainty			+/-0.472							
Uranium-235/236				0.366	pCi/g						
	Uncertainty			+/-0.150							
Uranium-238	5.20			5.08	pCi/g		97.6	(75%-125%)			
	Uncertainty			+/-0.486							
QC1204438295	MB										
Uranium-233/234				0.102	pCi/g					11/26/19	13:54
	Uncertainty			+/-0.0813							
Uranium-235/236			U	0.0306	pCi/g						
	Uncertainty			+/-0.0524							
Uranium-238			U	0.0465	pCi/g						
	Uncertainty			+/-0.0549							
Batch	1941446										
QC1204438314	497105041		DUP								
Uranium-233/234		1.18		1.17	pCi/g	1.24		(0%-20%)	BXA4	11/26/19	09:35
	Uncertainty	+/-0.242		+/-0.242							
Uranium-235/236		0.146		0.0932	pCi/g	44		(0% - 100%)			
	Uncertainty	+/-0.100		+/-0.0808							
Uranium-238		0.814		0.722	pCi/g	12		(0%-20%)			
	Uncertainty	+/-0.199		+/-0.189							
QC1204438315	LCS										
Uranium-233/234				5.40	pCi/g					11/26/19	09:35
	Uncertainty			+/-0.532							
Uranium-235/236				0.284	pCi/g						
	Uncertainty			+/-0.139							
Uranium-238	5.22			5.72	pCi/g		110	(75%-125%)			
	Uncertainty			+/-0.546							
QC1204438313	MB										
Uranium-233/234			U	0.0168	pCi/g					11/26/19	09:35
	Uncertainty			+/-0.0429							
Uranium-235/236			U	0.00694	pCi/g						
	Uncertainty			+/-0.0386							

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1941446										
Uranium-238			U	0.00821	pCi/g				BXA4	11/26/19	09:35
	Uncertainty			+/-0.0308							
Rad Liquid Scintillation											
Batch	1957084										
QC1204470800	497105001 DUP										
Technetium-99	U	-0.602	U	-1.29	pCi/g	N/A			N/A	JJ3	01/14/20 11:28
	Uncertainty	+/-2.64		+/-2.46							
QC1204470801	LCS										
Technetium-99	61.7			50.9	pCi/g		82.6	(75%-125%)			01/14/20 11:45
	Uncertainty			+/-3.72							
QC1204470799	MB										
Technetium-99			U	0.0206	pCi/g						01/14/20 11:12
	Uncertainty			+/-2.20							
Batch	1957085										
QC1204470803	497105021 DUP										
Technetium-99	U	-0.650	U	-1.60	pCi/g	N/A			N/A	JJ3	01/14/20 11:36
	Uncertainty	+/-2.15		+/-2.30							
QC1204470804	LCS										
Technetium-99	64.6			55.3	pCi/g		85.6	(75%-125%)			01/14/20 11:52
	Uncertainty			+/-3.91							
QC1204470802	MB										
Technetium-99			U	-0.309	pCi/g						01/14/20 11:19
	Uncertainty			+/-2.27							
Batch	1957086										
QC1204470806	497105041 DUP										
Technetium-99	U	-1.30	U	0.562	pCi/g	N/A			N/A	JJ3	01/14/20 12:07
	Uncertainty	+/-1.71		+/-2.13							
QC1204470807	LCS										
Technetium-99	61.9			62.9	pCi/g		102	(75%-125%)			01/14/20 12:28
	Uncertainty			+/-3.56							
QC1204470805	MB										
Technetium-99			U	0.984	pCi/g						01/14/20 11:46
	Uncertainty			+/-2.10							

Notes:

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QC Summary

Workorder: 497105

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Technical Case Narrative
Westinghouse Electric Co, LLC
SDG #: 497105

GC/MS Volatile

Product: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Analytical Method: SW846 8260B

Analytical Procedure: GL-OA-E-038 REV# 28

Analytical Batch: 1942304

Preparation Method: SW846 5035A

Preparation Procedure: GL-OA-E-039 REV# 13

Preparation Batch: 1942301

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105003	C-18-3
497105008	C-20-3
497105013	C-25+26-3
497105016	C-25+26-6
497105021	C-65-3
497105026	C-46-3
497105031	C-35-3
497105034	C-35-6
497105037	C-44-3
497105040	C-44-6
497105041	C-32-1
497105046	C-31-6
497105047	C-30-7
497105052	C-29-12
497105053	C-28-13
497105056	C-31-16
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204440242	Method Blank (MB)
1204440243	Laboratory Control Sample (LCS)
1204440244	Laboratory Control Sample Duplicate (LCSD)
1204442785	Method Blank (MB)
1204442786	Method Blank (MB)
1204442787	Laboratory Control Sample (LCS)
1204442788	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Re-extraction/Re-analysis

Sample 497105052 (C-29-12) was re-analyzed due to unacceptable surrogate or internal standard recoveries in the initial analysis. The re-analyses confirmed/and or passed and were reported.

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1941291

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1941290

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105001	C-18-1
497105002	C-18-2
497105003	C-18-3
497105004	C-18-4
497105005	C-18-5
497105006	C-20-1
497105007	C-20-2
497105008	C-20-3
497105009	C-20-4
497105010	C-20-5
497105011	C-25+26-1
497105012	C-25+26-2
497105013	C-25+26-3
497105014	C-25+26-4
497105015	C-25+26-5
497105016	C-25+26-6
497105017	C-25+26-7
497105018	C-25+26-8
497105019	C-65-1
497105020	C-65-2
1204437857	Method Blank (MB) ICP-MS
1204437858	Laboratory Control Sample (LCS)
1204437874	Laboratory Control Sample (LCS)
1204437861	497105001(C-18-1L) Serial Dilution (SD)
1204437859	497105001(C-18-1S) Matrix Spike (MS)
1204437875	497105001(C-18-1S) Matrix Spike (MS)
1204437860	497105001(C-18-1SD) Matrix Spike Duplicate (MSD)
1204437876	497105001(C-18-1SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497105004 (C-18-4) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497105									
	001	002	003	004	005	006	007	008	009	010
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	10X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497105									
	011	012	013	014	015	016	017	018	019	020
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1941293

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1941292

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# **Client Sample Identification**

497105021	C-65-3
497105022	C-65-4
497105023	C-65-5
497105024	C-46-1
497105025	C-46-2
497105026	C-46-3
497105027	C-46-4
497105028	C-46-5
497105029	C-35-1
497105030	C-35-2
497105031	C-35-3
497105032	C-35-4
497105033	C-35-5
497105034	C-35-6
497105035	C-44-1
497105036	C-44-2
497105037	C-44-3
497105038	C-44-4
497105039	C-44-5
497105040	C-44-6
1204437862	Method Blank (MB)ICP-MS
1204437863	Laboratory Control Sample (LCS)
1204437877	Laboratory Control Sample (LCS)
1204437866	497105021(C-65-3L) Serial Dilution (SD)
1204437864	497105021(C-65-3S) Matrix Spike (MS)
1204437878	497105021(C-65-3S) Matrix Spike (MS)
1204437865	497105021(C-65-3SD) Matrix Spike Duplicate (MSD)
1204437879	497105021(C-65-3SD) Matrix Spike Duplicate (MSD)
1204444464	497105021(C-65-3PS) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
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1204437864 (C-65-3MS)	Uranium-235	298* (75%-125%)
	Uranium-238	158* (75%-125%)
1204437865 (C-65-3MSD)	Uranium-235	431* (75%-125%)
	Uranium-238	213* (75%-125%)

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497105040 (C-44-6) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497105									
	021	022	023	024	025	026	027	028	029	030
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497105									
	031	032	033	034	035	036	037	038	039	040
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	40X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	20X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1941295

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1941294

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105041	C-32-1
497105042	C-32-2
497105043	C-32-3
497105044	C-31-4
497105045	C-31-5

497105046	C-31-6
497105047	C-30-7
497105048	C-30-8
497105049	C-30-9
497105050	C-29-10
497105051	C-29-11
497105052	C-29-12
497105053	C-28-13
497105054	C-28-14
497105055	C-28-15
497105056	C-31-16
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204437867	Method Blank (MB)ICP-MS
1204437868	Laboratory Control Sample (LCS)
1204437880	Laboratory Control Sample (LCS)
1204437871	497105041(C-32-1L) Serial Dilution (SD)
1204437869	497105041(C-32-1S) Matrix Spike (MS)
1204437881	497105041(C-32-1S) Matrix Spike (MS)
1204437870	497105041(C-32-1SD) Matrix Spike Duplicate (MSD)
1204437882	497105041(C-32-1SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497105									
	041	042	043	044	045	046	047	048	049	050
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
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Analyte	497105									
	051	052	053	054	055	056	057	058	059	060
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

General Chemistry

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941739 and 1941737

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105001	C-18-1
497105002	C-18-2
497105003	C-18-3
497105004	C-18-4
497105005	C-18-5
497105006	C-20-1
497105007	C-20-2
497105008	C-20-3
497105009	C-20-4
497105010	C-20-5
1204438912	Method Blank (MB)
1204438913	Laboratory Control Sample (LCS)
1204438914	497105001(C-18-1) Sample Duplicate (DUP)
1204438915	497105001(C-18-1) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204438915 (C-18-1MS)	21* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941873 and 1941870

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105011	C-25+26-1
497105012	C-25+26-2
497105013	C-25+26-3
497105014	C-25+26-4
497105015	C-25+26-5
497105016	C-25+26-6
497105017	C-25+26-7
497105018	C-25+26-8
497105019	C-65-1
497105020	C-65-2
1204439221	Method Blank (MB)
1204439222	Laboratory Control Sample (LCS)
1204439223	497105011(C-25+26-1) Sample Duplicate (DUP)
1204439224	497105011(C-25+26-1) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204439224 (C-25+26-1MS)	9.93* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941879 and 1941877

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105021	C-65-3
497105022	C-65-4
497105023	C-65-5
497105024	C-46-1
497105025	C-46-2
497105026	C-46-3
497105027	C-46-4
497105028	C-46-5
497105029	C-35-1
497105030	C-35-2
1204439236	Method Blank (MB)
1204439237	Laboratory Control Sample (LCS)
1204439238	497105021(C-65-3) Sample Duplicate (DUP)
1204439239	497105021(C-65-3) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204439239 (C-65-3MS)	29.6* (75%-125%)

Miscellaneous Information

Manual Integrations

Sample 1204439238 (C-65-3DUP) was manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941889 and 1941880

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105031	C-35-3
497105032	C-35-4

497105033	C-35-5
497105034	C-35-6
497105035	C-44-1
497105056	C-31-16
1204439240	Method Blank (MB)
1204439241	Laboratory Control Sample (LCS)
1204439242	497105031(C-35-3) Sample Duplicate (DUP)
1204439243	497105031(C-35-3) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204439243 (C-35-3MS)	38.7* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941949 and 1941944

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105036	C-44-2
497105037	C-44-3
497105038	C-44-4
497105039	C-44-5
497105040	C-44-6
497105041	C-32-1
497105042	C-32-2
497105043	C-32-3
497105044	C-31-4
497105045	C-31-5
1204439398	Method Blank (MB)
1204439399	Laboratory Control Sample (LCS)
1204439400	497105036(C-44-2) Sample Duplicate (DUP)
1204439401	497105036(C-44-2) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204439401 (C-44-2MS)	28.3* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1941989 and 1941987

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105046	C-31-6
497105047	C-30-7
497105048	C-30-8
497105049	C-30-9
497105050	C-29-10
497105051	C-29-11
497105052	C-29-12
497105053	C-28-13
497105054	C-28-14
497105055	C-28-15
1204439557	Method Blank (MB)
1204439558	Laboratory Control Sample (LCS)
1204439559	497105046(C-31-6) Sample Duplicate (DUP)
1204439560	497105046(C-31-6) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is

less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204439560 (C-31-6MS)	38.2* (80%-120%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1942419 and 1942418

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204440510	Method Blank (MB)
1204440511	Laboratory Control Sample (LCS)
1204440512	497105057(C-31-17) Sample Duplicate (DUP)
1204440513	497105057(C-31-17) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204440513 (C-31-17MS)	46.4* (75%-125%)

Radiochemistry

Product: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1941441

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941263

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105001	C-18-1
497105002	C-18-2
497105003	C-18-3
497105004	C-18-4
497105005	C-18-5
497105006	C-20-1
497105007	C-20-2
497105008	C-20-3
497105009	C-20-4
497105010	C-20-5
497105011	C-25+26-1
497105012	C-25+26-2
497105013	C-25+26-3
497105014	C-25+26-4
497105015	C-25+26-5
497105016	C-25+26-6
497105017	C-25+26-7
497105018	C-25+26-8
497105019	C-65-1
497105020	C-65-2
1204438289	Method Blank (MB)
1204438290	497105001(C-18-1) Sample Duplicate (DUP)
1204438291	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Manual Integration

Manual integrations of alpha spectroscopy spectra 497105006 (C-20-1) and 497105012 (C-25+26-2) were performed to fully separate counts in Regions of Interest which would have been biased.

Product: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1941443

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941264

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105021	C-65-3
497105022	C-65-4
497105023	C-65-5
497105024	C-46-1
497105025	C-46-2
497105026	C-46-3
497105027	C-46-4
497105028	C-46-5
497105029	C-35-1
497105030	C-35-2
497105031	C-35-3
497105032	C-35-4
497105033	C-35-5
497105034	C-35-6
497105035	C-44-1
497105036	C-44-2
497105037	C-44-3
497105038	C-44-4
497105039	C-44-5
497105040	C-44-6
1204438295	Method Blank (MB)
1204438296	497105021(C-65-3) Sample Duplicate (DUP)
1204438297	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank Criteria

The blank result (See Below) is greater than the MDC but less than the required detection limit.

Sample	Analyte	Value
1204438295 (MB)	Uranium-233/234	Result: 0.102 pCi/g > MDA: 0.0938 pCi/g <= RDL: 0.500 pCi/g

Duplication Criteria between QC Sample and Duplicate Sample

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1204438296 (C-65-3DUP)	Uranium-233/234	RPD 34.4* (0.00%-20.00%) RER 2.35 (0-3)
	Uranium-238	RPD 22.6* (0.00%-20.00%) RER 1.2 (0-3)

Miscellaneous Information

Manual Integration

Manual integration of alpha spectroscopy spectra 497105024 (C-46-1) was performed to fully separate counts in Regions of Interest which would have been biased.

Product: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1941446

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941267

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105041	C-32-1
497105042	C-32-2
497105043	C-32-3
497105044	C-31-4
497105045	C-31-5
497105046	C-31-6
497105047	C-30-7
497105048	C-30-8
497105049	C-30-9
497105050	C-29-10
497105051	C-29-11
497105052	C-29-12
497105053	C-28-13
497105054	C-28-14
497105055	C-28-15
497105056	C-31-16
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204438313	Method Blank (MB)
1204438314	497105041(C-32-1) Sample Duplicate (DUP)
1204438315	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Manual Integration

Manual integrations of alpha spectroscopy spectra 1204438313 (MB), 497105045 (C-31-5) and 497105058 (C-30-18) were performed to fully separate counts in Regions of Interest which would have been biased.

Product: Dry Weight

Analytical Method: ASTM D 2216 (Modified)

Analytical Procedure: GL-OA-E-020 REV# 13

Analytical Batch: 1941263

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941263

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105001	C-18-1
497105002	C-18-2
497105003	C-18-3
497105004	C-18-4
497105005	C-18-5
497105006	C-20-1
497105007	C-20-2
497105008	C-20-3
497105009	C-20-4
497105010	C-20-5
497105011	C-25+26-1
497105012	C-25+26-2
497105013	C-25+26-3
497105014	C-25+26-4
497105015	C-25+26-5
497105016	C-25+26-6
497105017	C-25+26-7
497105018	C-25+26-8
497105019	C-65-1
497105020	C-65-2
1204437819	497105001(C-18-1) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Dry Weight

Analytical Method: ASTM D 2216 (Modified)

Analytical Procedure: GL-OA-E-020 REV# 13

Analytical Batch: 1941264

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941264

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105021	C-65-3
497105022	C-65-4
497105023	C-65-5
497105024	C-46-1
497105025	C-46-2
497105026	C-46-3
497105027	C-46-4
497105028	C-46-5
497105029	C-35-1
497105030	C-35-2
497105031	C-35-3
497105032	C-35-4
497105033	C-35-5
497105034	C-35-6
497105035	C-44-1
497105036	C-44-2
497105037	C-44-3
497105038	C-44-4
497105039	C-44-5
497105040	C-44-6
1204437826	497105021(C-65-3) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Dry Weight

Analytical Method: ASTM D 2216 (Modified)

Analytical Procedure: GL-OA-E-020 REV# 13

Analytical Batch: 1941267

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1941267

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105041	C-32-1
497105042	C-32-2
497105043	C-32-3
497105044	C-31-4
497105045	C-31-5
497105046	C-31-6
497105047	C-30-7
497105048	C-30-8
497105049	C-30-9
497105050	C-29-10
497105051	C-29-11
497105052	C-29-12
497105053	C-28-13
497105054	C-28-14
497105055	C-28-15
497105056	C-31-16
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204437827	497105041(C-32-1) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Liquid Scint Tc99, Soil

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1957084

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105001	C-18-1
497105002	C-18-2
497105003	C-18-3
497105004	C-18-4
497105005	C-18-5
497105006	C-20-1
497105007	C-20-2
497105008	C-20-3
497105009	C-20-4
497105010	C-20-5
497105011	C-25+26-1
497105012	C-25+26-2
497105013	C-25+26-3
497105014	C-25+26-4
497105015	C-25+26-5
497105016	C-25+26-6
497105017	C-25+26-7
497105018	C-25+26-8
497105019	C-65-1
497105020	C-65-2
1204470799	Method Blank (MB)
1204470800	497105001(C-18-1) Sample Duplicate (DUP)
1204470801	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Re-prep/Re-analysis

Samples were re-prepped with larger aliquots in order to meet a lower detection limit. Reanalysis is reported.

Recounts

Sample 497105020 (C-65-2) was recounted due to high MDC. The recount is reported.

Product: Liquid Scint Tc99, Soil

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1957085

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
-----------------------	-------------------------------------

497105021	C-65-3
497105022	C-65-4
497105023	C-65-5
497105024	C-46-1
497105025	C-46-2
497105026	C-46-3
497105027	C-46-4
497105028	C-46-5
497105029	C-35-1
497105030	C-35-2
497105031	C-35-3
497105032	C-35-4
497105033	C-35-5
497105034	C-35-6
497105035	C-44-1
497105036	C-44-2
497105037	C-44-3
497105038	C-44-4
497105039	C-44-5
497105040	C-44-6
1204470802	Method Blank (MB)
1204470803	497105021(C-65-3) Sample Duplicate (DUP)
1204470804	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Re-prep/Re-analysis

Samples were re-prepped with larger aliquots in order to meet a lower detection limit. Reanalysis is reported.

Product: Liquid Scint Tc99, Soil

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1957086

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497105041	C-32-1
497105042	C-32-2
497105043	C-32-3
497105044	C-31-4
497105045	C-31-5
497105046	C-31-6

497105047	C-30-7
497105048	C-30-8
497105049	C-30-9
497105050	C-29-10
497105051	C-29-11
497105052	C-29-12
497105053	C-28-13
497105054	C-28-14
497105055	C-28-15
497105056	C-31-16
497105057	C-31-17
497105058	C-30-18
497105059	C-28-19
497105060	C-28-20
1204470805	Method Blank (MB)
1204470806	497105041(C-32-1) Sample Duplicate (DUP)
1204470807	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Re-prep/Re-analysis

Samples were re-prepped with larger aliquots in order to meet a lower detection limit. Reanalysis is reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Page: 1 of 6
 Subject # WNUC009
 GEL Quote #: WNUC009
 QC Number (1): 497105
 PO Number: 450077846142
 GEL Work Order Number: 497105
 GEL Project Manager: Logsdon

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chemistry | Radiochemistry | Radiobiassay | Specialty Analytics
Chain of Custody and Analytical Request

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered?	Four number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
C-18-1	11-13-19	1202	G		SO	1	1	150 u ASPC 150 u ICRMS Fluoride VOCs		Note: extra sample is required for sample specific QC
C-18-2	11-13-19	1200	G		SO	1	1			
C-18-3	11-13-19	1210	G		SO	2	2			
C-18-4	11-13-19	1210	G		SO	1	1			
C-18-5	11-13-19	1219	G		SO	1	1			
C-20-1	11-13-19	1230	G		SO	1	1			
C-20-2	11-13-19	1239	G		SO	1	1			
C-20-3	11-13-19	1241	G		SO	2	2			
C-20-4	11-13-19	1245	G		SO	1	1			
C-20-5	11-13-19	1250	G		SO	1	1			

Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date _____ Time _____
 1. Secure Location 11/20/19 1035
 2. Secure Location 11/20/19 1130
 3. Secure Location 11/20/19 1511

Chain of Custody Signatures

TAT Requested: Normal: Yes No Rush: Specify: 2 WEEKS (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, ED = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards: FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 Listed Waste: LW = Listed Waste
 (F, K, P and U-listed wastes.)
 Waste code(s): _____
 TSCA Regulated: PCB = Polychlorinated biphenyls
 MR = Miscellaneous RCRA metals
 As = Arsenic Hg = Mercury
 Ba = Barium Se = Selenium
 Cd = Cadmium Ag = Silver
 Cr = Chromium MR = Miscellaneous RCRA metals
 Pb = Lead

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page: 2 of 9
 Project #: WNUUC009
 Quote #: WNUUC009
 Order Number (1):
 Order Number: 4500778401 LN 2
 Project Name: WESTINGHOUSE ELECTRIC CO. LLC Phone # 803.312.4171
 Address: 5801 Bluff Rd, Hopkins SC 29061
 Contacted By: Crews | Logsdon Send Results To: logsdoc@westinghouse.com
 GEL Project Manager:
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chain of Custody and Analytical Request
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Sample Analysis Requested (6) (Fill in the number of containers for each test)

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military (hhmm))	QC Code (6)	Field Filtered (6)	Sample Matrix (6)	Should this sample be considered: Please supply isotopic info	Total number of containers	Preservative Type (6)	Comments
C-25+20-1	11-13-19	1307	G		SO	(7) Known or possible hazards	1		150 u α spec 150 u 1cpms VOCs TC-99 Fluoride
C-25+20-2	11-13-19	1310	G		SO		1		
C-25+20-3	11-13-19	1312	G		SO		2		
C-25+20-4	11-13-19	1315	G		SO		1		
C-25+20-5	11-13-19	1345	G		SO		1		
C-25+20-6	11-13-19	1350	G		SO		2		
C-25+20-7	11-13-19	1355	G		SO		1		
C-25+20-8	11-13-19	1400	G		SO		1		
C-25-1	11-13-19	1410	G		SO		1		
C-25-2	11-13-19	1415	G		SO		1		

Chain of Custody Signatures
 Relinquished By (Signed) Date Time Received by (signed) Date Time
 1. R. Cruise 11/20/19 1035 SECURE LOCATION 11/20/19 1035
 2. S. Cruz Location 11/20/19 1100 [Signature] 11/20/19 1130
 3. [Signature] 11/20/19 1511 [Signature] 11/20/19 1511
 TAT Requested: Normal: Rush: Specify: 2 WORKS (Subject to Surcharge)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards: FL = Flammable/Ignitable, LW = Listed Waste, CO = Corrosive, RE = Reactive
 TSCA Regulated: PCB = Polychlorinated biphenyls
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Miscellaneous
 Pb = Lead
 Other: OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description:
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page: 3 of 6
 Project # WNUUC009
 GEL Quote # WNUUC009
 GEL Number 01
 PO Number: 4500T184U1LN2
 Client Name: Westinghouse Electric Co LLC Phone # 803.312.4171
 Project/Site Name: ANALYTICAL-ENV-LEGWASTE Fax # 803.695.3904
 Address: 5801 Bluff Rd, Hopkins SC 29001
 Collected By: Crews Logsdon Send Results To: logsdoc@westinghouse.com
 97105 Rev1

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
Chain of Custody and Analytical Request
 GEL Project Manager:
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	Date	Time	Received by (signed)	Date	Time	Date Collected (mm-dd-yy)	Time Collected (hh:mm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radioactive license info	Should this sample be considered?	Sample Analysis Requested (d) (Fill in the number of containers for each test)		Comments				
													Known or possible hazards	Total number of containers					
C-65-3	11-13-19	1418	G	G	SO								X	ISOU ICMs	ISOU ICMs	Fluoride	VOCs		
C-65-4	11-13-19	1420	G	G	SO								X						
C-65-5	11-13-19	1424	G	G	SO								X						
C-40-1	11-13-19	1450	G	G	SO								X						
C-40-2	11-13-19	1453	G	G	SO								X						
C-40-3	11-13-19	1500	G	G	SO								X						
C-40-4	11-13-19	1504	G	G	SO								X						
C-40-5	11-13-19	1509	G	G	SO								X						
C-35-1	11-13-19	1507	G	G	SO								X						
C-35-2	11-13-19	1513	G	G	SO								X						

Chain of Custody Signatures
 Relinquished By (Signed) Date Time Received by (signed) Date Time
 1 R. Crews 11/20/19 10:35 Secure Location 11/20/19 10:35
 2 Secure Location 11/20/19 11:30 R. Crews 11/20/19 11:30
 3 R. Crews 11/20/19 15:11 Secure Location 11/20/19 15:11
 TAT Requested: Normal: Yes No Rush: Yes No Specify: 2 WORK Subject to Surcharge
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FB = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards: FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 TSCA Regulated
 PCB = Polychlorinated biphenyls
 RCRA Metals: Hg = Mercury
Ba = Barium
Cd = Cadmium
Cr = Chromium
Pb = Lead
Se = Selenium
Ag = Silver
MR = Miscellaneous
RCRA metals
 Listed Waste: LW = Listed Waste
 Waste code(s): (F,K,P and U-listed wastes.)
 Other: OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page: 4 of 4
 Project #: WNUC009
 GEL Quote #: WNUC009
 GEL Number (1):
 GEL Number: 45007784U L2
 Client Name: Westinghouse Electric Co LLC Phone # 803.312.4471
 Project/Site Name: ANALYTICAL-ENV-LEGWASTE Fax # 803.695.3914
 Address: 5801 Bluff Rd, Hopkins SC 29061
 Collected By: Crews | Logsdon Send Results To: logsdon@westinghouse.com
 97105 Rev1

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
 Chain of Custody and Analytical Request
 GEL Work Order Number:
 GEL Project Manager:
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	Date	Time	Received by (signed)	Date	Time	Field Sample Matrix (6)	Field Filtered (6)	QC Code (7)	Collected (Military) (thru)	Date Collected (mm-dd-yy)	Preservative Type (6)	Comments	Total number of containers	Should this sample be considered:	Sample Analysis Requested (8) (Fill in the number of containers for each test)		
															(?) Known or Radiogenic isotopic info	possible hazards	
C-35-3	11-13-19	1518	G	SO													
C-35-4	11-13-19	1525	G	SO													
C-35-5	11-13-19	1531	G	SO													
C-35-6	11-13-19	1536	G	SO													
C-44-1	11-13-19	1530	G	SO													
C-44-2	11-13-19	1534	G	SO													
C-44-3	11-13-19	1537	G	SO													
C-44-4	11-13-19	1542	G	SO													
C-44-5	11-13-19	1545	G	SO													
C-44-6	11-13-19	1549	G	SO													

Chain of Custody Signatures
 Relinquished By (Signed) Date Time Received by (signed) Date Time
 1. R. Crews 11/20/19 1035 S. Suarez Location 11/20/19 1035
 2. S. Suarez Location 11/20/19 1130
 3. S. Suarez Location 11/20/19 1511
 TAT Requested: Normal: Rush: Specify: 2 WORKS (Subject to Surcharge)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 82560B, 6010B/7470A) and number of containers provided for each (i.e. 82560B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, if no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards
 FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 Listed Waste
 LW = Listed Waste
 (F,K,P and U-listed wastes.)
 Waste code(s):
 TSCA Regulated
 PCB = Polychlorinated biphenyls
 RCRA Metals
 As = Arsenic
 Ba = Barium
 Cd = Cadmium
 Cr = Chromium
 Pb = Lead
 Hg = Mercury
 Se = Selenium
 Ag = Silver
 MR = Miscellaneous
 RCRA metals
 Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description:
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page: 10 of 10
 Project #: NNWUC009
 GEL Quote #: NNWUC009
 QCOC Number (1): 450077840 LN 2
 GEL Work Order Number: 450077840 LN 2

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Chain of Custody and Analytical Request

Client Name: Westinghouse Electric Co. Phone #: 803.312.4171
 Project/Site Name: ANALYTICAL-ENV-LEGCYWSTEX # 803.495.3964
 Address: 5801 Bluff Rd, Hopkins SC 29061
 Collected by: Crews/Logsdon Send Results To: logsdon@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID <i>* For composites - indicate start and stop date/time</i>	Date Collected (mm-dd-yy)	Time Collected (Military (hhmm))	QC Code (1)	Field Filtered (2)	Sample Matrix (4)	Should this sample be considered: TSCA Regulated	Sample Analysis Requested (5)						Preservative Type (6)	Comments	
							SOU ASPC	SOU ICMS	Fluoride	TC-99	VOCs	Other			Other
C-29-11	11-14-19	0934	G		SO		X	X	X	X					
C-29-12	11-14-19	0939	G		SO		X	X	X	X					
C-28-13	11-14-19	0946	G		SO		X	X	X	X					
C-28-14	11-14-19	0950	G		SO		X	X	X	X					
C-28-15	11-14-19	0953	G		SO		X	X	X	X					
C-31-16	11-14-19	0952	G		SO		X	X	X	X					
C-31-17	11-14-19	0956	G		SO		X	X	X	X					
C-30-18	11-14-19	1002	G		SO		X	X	X	X					
C-28-19	11-14-19	1005	G		SO		X	X	X	X					
C-28-20	11-14-19	1010	G		SO		X	X	X	X					

TAT Requested: Normal: Rush: Specify: 2 weeks (Subject to Surcharges) Fax Results: Yes / No
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other _____

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<u>R Crews</u>	<u>11/20/19</u>	<u>1035</u>	<u>SEGM 12 LOCATOR</u>	<u>11/20/19</u>	<u>1035</u>
<u>SEGMAL LOCATOR</u>	<u>11/20/19</u>	<u>1130</u>	<u>SEGM 12 LOCATOR</u>	<u>11/20/19</u>	<u>1130</u>
<u>SEGMAL LOCATOR</u>	<u>11/20/19</u>	<u>1511</u>	<u>SEGM 12 LOCATOR</u>	<u>11/20/19</u>	<u>1511</u>

GEL PM: _____
 Method of Shipment: _____ Date Shipped: _____
 Airbill #: _____
 Airbill #: _____

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, if no preservative is added = leave field blank
 For Lab Receiving Use Only
 Custody Seal Intact? YES / NO
 Cooler Temp: C

WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

SAMPLE RECEIPT & REVIEW FORM

Client: <u>WVUC</u>		SDG/AR/COC/Work Order: <u>497105</u>	
Received By: <u>ZKW</u>		Date Received: <u>11/20/19</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other	
		Suspected Hazard Information	
		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		Yes <input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		Yes <input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		Yes <input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): _____ CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		Yes <input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		Yes <input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____
Sample Receipt Criteria		Yes	NA
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: _____ *all temperatures are recorded in Celsius TEMP: <u>1°C</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: _____ If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes <input checked="" type="checkbox"/> No ___ NA ___ (If yes, take to VOA Freezer)
		<input checked="" type="checkbox"/>	Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA <input checked="" type="checkbox"/> (If unknown, select No)
		<input checked="" type="checkbox"/>	Are liquid VOA vials free of headspace? Yes ___ No ___ NA <input checked="" type="checkbox"/> Sample ID's and containers affected: _____
8	Samples received within holding time?	<input checked="" type="checkbox"/>	ID's and tests affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	ID's and containers affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials SH Date 11/21/19 Page 1 of 1

List of current GEL Certifications as of 16 January 2020

State	Certification
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-30
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



January 15, 2020

Ms. Cynthia Logsdon
Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina 29205

Re: ENV-CONSENTA-4500778461
Work Order: 500519

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 08, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

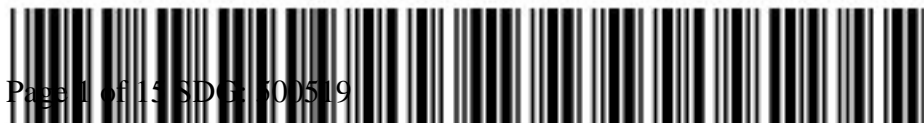
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Katelyn Gray for
Hope Taylor
Project Manager

Purchase Order: PO 4500778461-2
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 500519 GEL Work Order: 500519

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Hope Taylor.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-#44-1	Project:	WNUC01519
Sample ID:	500519001	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	07-JAN-20 14:48		
Receive Date:	08-JAN-20		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.769	+/-0.324	0.237	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236	U	0.0391	+/-0.110	0.117	0.500	pCi/g							
Uranium-238		0.864	+/-0.342	0.245	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-#44-2	Project:	WNUC01519
Sample ID:	500519002	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	07-JAN-20 14:59		
Receive Date:	08-JAN-20		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.826	+/-0.375	0.378	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236	U	0.202	+/-0.206	0.204	0.500	pCi/g							
Uranium-238		0.723	+/-0.325	0.226	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			90.4	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-#64	Project: WNUC01519
Sample ID: 500519003	Client ID: WNUC009
Matrix: Soil	
Collect Date: 07-JAN-20 14:30	
Receive Date: 08-JAN-20	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.49	+/-0.718	0.318	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236	U	0.0912	+/-0.156	0.137	0.500	pCi/g							
Uranium-238		1.63	+/-0.492	0.243	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.5	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-#65-1	Project:	WNUC01519
Sample ID:	500519004	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	07-JAN-20 15:33		
Receive Date:	08-JAN-20		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.10	+/-0.389	0.281	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236	U	0.120	+/-0.178	0.260	0.500	pCi/g							
Uranium-238		0.609	+/-0.289	0.211	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.7	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID:	C-#65-2	Project:	WNUC01519
Sample ID:	500519005	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	07-JAN-20 15:40		
Receive Date:	08-JAN-20		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.20	+/-0.397	0.227	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236	U	0.109	+/-0.157	0.189	0.500	pCi/g							
Uranium-238		0.936	+/-0.350	0.195	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83	(15%-125%)

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 15, 2020

Company : Westinghouse Electric Company, LLC
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA-4500778461

Client Sample ID: C-#66	Project: WNUC01519
Sample ID: 500519006	Client ID: WNUC009
Matrix: Soil	
Collect Date: 07-JAN-20 14:40	
Receive Date: 08-JAN-20	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		4.56	+/-0.729	0.259	0.500	pCi/g			MP2	01/11/20	1130	1956938	1
Uranium-235/236		0.348	+/-0.239	0.202	0.500	pCi/g							
Uranium-238		2.02	+/-0.485	0.180	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	01/08/20	1703	1956758

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.7	(15%-125%)

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: January 15, 2020

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 500519

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1956938										
QC1204470503	500519001	DUP									
Uranium-233/234		0.769		1.04	pCi/g	30.2		(0% - 100%)	MP2	01/11/20	11:30
	Uncertainty	+/-0.324		+/-0.370							
Uranium-235/236	U	0.0391		0.226	pCi/g	63.2		(0% - 100%)			
	Uncertainty	+/-0.110		+/-0.196							
Uranium-238		0.864		0.655	pCi/g	27.6		(0% - 100%)			
	Uncertainty	+/-0.342		+/-0.287							
QC1204470505	LCS										
Uranium-233/234				11.9	pCi/g					01/11/20	11:30
	Uncertainty			+/-1.07							
Uranium-235/236				0.333	pCi/g						
	Uncertainty			+/-0.211							
Uranium-238	11.6			11.5	pCi/g		98.7	(75%-125%)			
	Uncertainty			+/-1.05							
QC1204470502	MB										
Uranium-233/234			U	0.134	pCi/g					01/11/20	11:30
	Uncertainty			+/-0.141							
Uranium-235/236			U	0.0671	pCi/g						
	Uncertainty			+/-0.115							
Uranium-238			U	0.0749	pCi/g						
	Uncertainty			+/-0.108							

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 500519

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Radiochemistry
Technical Case Narrative
Westinghouse Electric Co, LLC
SDG #: 500519**

Product: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1956938

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1956758

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
500519001	C-#44-1
500519002	C-#44-2
500519003	C-#64
500519004	C-#65-1
500519005	C-#65-2
500519006	C-#66
1204470502	Method Blank (MB)
1204470503	500519001(C-#44-1) Sample Duplicate (DUP)
1204470505	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Sample 1204470503 (C-#44-1DUP) was recounted due to high relative percent difference/relative error ratio. The recount is reported.

Product: Dry Weight

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1956758

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
500519001	C-#44-1
500519002	C-#44-2
500519003	C-#64
500519004	C-#65-1
500519005	C-#65-2
500519006	C-#66

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Page: 1 of 1
 Project # WNUC009
 GEL Quote # 500519
 GEL # 4500778461-Ln2-ANAL-ENV-LEGCYWaste
 Client Name: Westinghouse
 Project/Site Name: 5801 Bluff Road, Hopkins, SC 29061
 Address: 5801 Bluff Road, Hopkins, SC 29061
 Collected By: Randy Crews Send Results To: logsdoej@westinghouse.com

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
Chain of Custody and Analytical Request
 GEL Work Order Number: 500519
 Phone # 803.647.3171
 Fax # 803.695.3964

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (hh:mm)	QC Code	Field Filtered	Sample Matrix	Should this sample be considered:		Total number of containers	Isotopic U by Alpha Spec	Preservative Type (6)	Comments
						Yes, please supply isotopic info.)	(7) Known or possible Hazards				
C-#44-1	1/7/2020	1448	G	N	SO			1	X		Note: extra sample is required for sample specific QC
C-#44-2	1/7/2020	1459	G	N	SO			1	X		
C-#64	1/7/2020	1430	G	N	SO			1	X		
C-#65-1	1/7/2020	1533	G	N	SO			1	X		
C-#65-2	1/7/2020	1540	G	N	SO			1	X		
C-#66	1/7/2020	1440	G	N	SO			1	X		

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<u>Randy Crews</u>	1/8/2020	<u>[Signature]</u>	1/8/2020	1028
<u>[Signature]</u>	1/8/2020	<u>[Signature]</u>	1/8/2020	1140
<u>[Signature]</u>	1/8/2020	<u>[Signature]</u>	1/8/2020	1501

TAT Requested: Normal: Rush: Specify: 5 day (Subject to Surchage)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank
 7.) **KNOWN OR POSSIBLE HAZARDS**
 Characteristic Hazards: FL = Flammable/Ignitable LW = Listed Waste CO = Corrosive RE = Reactive TSCA Regulated PCB = Polychlorinated biphenyls
 RCRA Metals: As = Arsenic Hg = Mercury Ba = Barium Se = Selenium Cd = Cadmium Ag = Silver Cr = Chromium MR = Misc. RCRA metals Pb = Lead
 Other: OT = Other / Unknown (i.e.: High/Low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

500519

Client: <u>WALC</u>		SDG/AR/COC/Work Order: <u>HST</u>		
Received By: <u>[Signature]</u>		Date Received: <u>1-8-20</u>		
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS <u>Field Services</u> Courier Other		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ (If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___)	
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's Flammable Foreign Soil RCR's Asbestos Beryllium Other: _____	
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry Ice None Other: _____ *All temperatures are provided in Celsius
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial # <u>12118</u> TEMP: <u>1°C</u> Secondary Temperature Device Serial # (if applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Parent, CP's and Containers Affected: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Preservation added, I will: _____
				If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA, freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected: _____
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected: _____
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				

List of current GEL Certifications as of 15 January 2020

State	Certification
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-30
Vermont	VT87156
Virginia NELAP	460202
Washington	C780