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-20-34

April 8, 2020

Subject: February 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 **March 6, 2020**:

(a) Actions during the previous month:
Westinghouse began implementation of the Final Remedial Investigation (RI) Work Plan on 6/10/19. To comply with **Item 4** of the CA, the following actions were completed this month.
- With DHEC in attendance on March 9, the site executed Phase I of the Technetium-99 (Tc-99) Source Investigation in accordance with the approved work plan submitted on 1/30/2020 (LTR-RAC-20-11).
- Submitted LTR-RAC-20-31, Hydrofluoric Acid Spiking Station #1 (HFSS#1) Soil Sampling Plan on 3/20/2020.

- Submitted LTR-RAC-20-32, East Lagoon Analytical Comparison on 3/23/2020 which compares the split sampling results collected in October 2019 by both Westinghouse and DHEC.
- Mechanical Area Operable Unit Source elimination
    - The grid strap nickel plating process was decommissioned the week of March 16, 2020. An external vendor, Clean Harbors executed tank, scrubber, and trench cleaning. The system is currently locked out and tagged out in a safe state until the cleaned process equipment vessels can be scheduled for complete removal from the facility (expected removal in April). The hazardous waste generated from the cleaning operations was shipped off-site by the normal hazardous waste manifesting process.
- Completed 5th and last shipment of the V-1454 bulk mixture (consisting of Tributyl Phosphate (TBP) Solvent / tetrachloroethylene / kerosene / uranium) to Energy Solutions on 3/27/2020.
- Completed the following activities to support the Southern Storage Area (SSA) Operable Unit (OU) per Work Plan Addendum 1 the week of March 23, 2020:
    - Packaged 9 intermodal containers for off-site shipment as low-level radioactive waste (LLRW)
        - 1 intermodal container (C-16) containing dry combustible material (DCM) was repackaged onto a lower trailer to meet roadway bridge clearance requirements
        - 1 intermodal container (C-57) containing DCM
        - 1 intermodal container (C-66) was re-floored and loaded with contaminated sintering furnace bricks
        - 6 intermodal containers containing contaminated zirconium tubing
    - Shipped 5 clean intermodal containers (S-16, C-42, C-45, C-53, and C-63) to CMC for metal recycling
    - Conducted Health Physics radiological surveys under all removed intermodal containers. Contaminated soil underneath intermodal containers C-57 and C-66 was removed until background radiological levels were achieved.

(b) Results of sampling and tests:

- In January and March of 2020, soil sampling was conducted under a group of intermodal containers (S-3, S-50, C-16, C-33, C-39, C-43, C-51, C-52, C-58, C-59, and C-67) removed from the SSAU in December 2019. Analytical results of the soil sampling, along with a graphic, are included in this monthly report as Attachments A-D.
    - Systematic and bias soil sampling was conducted in accordance with the approved SSAOU Soil Sampling Work Plan.
    - The initial analytical results revealed soil contamination for uranium in two small areas, one under S-3 and one under C-16. A second set of analytical sampling for uranium under S-3 was conducted to delineate the area of contamination. Once results were received from the second sampling event, the contaminated soil was removed from the former footprints of S-3 and C-16, restoring the soil to residential screening levels. To confirm the soil met the residential screening levels, a third and

final set of samples (confirmatory) were analyzed and are included with this report as Attachment D.

- The VOC results were non-detectable for tetrachloroethylene and its daughter products (trichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, and vinyl chloride) for this round of soil sampling in the SSAOU. Any VOC analysis with results above a detection limit will be tabulated and reported to DHEC in the pending consolidated report of soil sampling conducted in the SSAOU.

(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:
  - Conduct soil sampling under intermodal containers removed in March 2020 per Department-approved Operable Unit Intermodal Container Work Plan (LTR-RAC-19-87, October 30).
  - Execute the Westinghouse Columbia Fuel Fabrication Facility HFSS#1 Soil Sampling Plan as approved by the department (schedule and personnel availability permitting).
    - Per the April 2, 2020 conference call with DHEC, one modification will be made to the HFSS#1 soil sampling plan. The first vertical profile sample in each boring will be collected from the 1-2 foot depth, not 0-2-foot. Making this change will ensure any contamination transferred to the top layer of soil during concrete removal does not skew the as found conditions of the soil underneath HFSS#1.
  - Continue project work in the Solvent Extraction Area to support the replacement of perchloroethylene and kerosene with dodecane in April 2020.
  - Propose Remedial Investigation Phase II Work Plan to SCDHEC via webinar.
  - Submit Results of Tc-99 Source Investigation Work Plan- Phase I
  - Initiate Phase II sampling of the Tc-99 Source Investigation Work Plan.
  - Resume wet combustible material (WCM) drum removal from the 11 remaining intermodal containers that have been on hold; segregate and store drums potentially containing perchloroethylene.

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

- Assessment activities identified in the Final Remedial Investigation Work Plan and associated addendums have been completed, with a summary report submitted.

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 Records

Attachment A

Southern Storage Area Operable Unit Soil Sampling Results

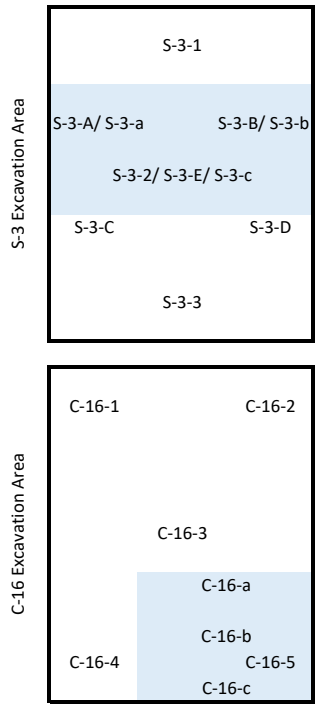
Tabulated Soil Sampling Results for the following Intermodal Containers/Sealands:

S-3	C-16	C-43	C-58
S-50	C-33	C-51	C-59
	C-39	C-52	C-67

Drawing with Soil Sampling Results

Sample ID	Analyte (pCi/g)								SOF	SOF		mg/kg
	U-234		U-235 DL	U-235	U-238	Sum U		Tc-99 DL	Tc-99	Resid.	Ind.		Fluoride
S-3-1	7.14			0.387	3.24	10.767	<	3.76	0	0.83	0.03		1.19
S-3-2	13			0.52	7.08	20.6	<	3.40	0	1.57	0.06		4.16
S-3-3	3.38	<	0.1310	0.113	1.4	4.893	<	3.54	0	0.37	0.01		0.775
S-3-A	12.5			0.513	5.87	18.883				1.44	0.05		
S-3-B	7.81			0.302	4.53	12.642				0.96	0.04		
S-3-C	1.69	<	0.2070	0.0327	1.11	2.8327				0.21	0.01		
S-3-D	7.18	<	0.3120	0.255	2.34	9.775				0.75	0.02		
S-3-E	9.67			0.308	4.32	14.298				1.09	0.03		
S-3-a	1.19			0.0955	1.17	2.4555				0.19	0.01		
S-3-b	1.05	<	0.2870	0.201	0.840	2.091				0.17	0.01		
S-3-c	0.821	<	0.1240	0.0414	0.738	1.6004				0.12	0.01		
C-16-1	1.7			0.105	0.718	2.523	<	3.53	0.0268	0.20	0.01	<	0.385
C-16-2	6.7			0.371	2.24	9.311	<	4.00	0.267	0.74	0.02		0.925
C-16-3	1.46			0.134	1.2	2.794	<	3.93	0	0.21	0.01		1.11
C-16-4	3			0.121	1.84	4.961	<	3.68	0	0.38	0.01	<	0.375
C-16-5	19.2			0.638	6.74	26.578	<	3.49	0	2.04	0.06		10.4
C-16-a	1.01	<	0.2180	0.0599	0.895	1.9649				0.15	0.01		
C-16-b	1.29	<	0.2670	0.122	0.823	2.235				0.17	0.01		
C-16-c	0.885	<	0.2050	0	0.834	1.719				0.13	0.00		

Sample ID	Analyte (pCi/g)							SOF	SOF		mg/kg
	U-234		U-235	U-238	Sum U		Tc-99	Resid.	Ind.		Fluoride
C-33-1	4.15		0.212	1.66	6.022	<	3.82	1.08	0.52	0.02		1.86
C-33-2	0.629	< 0.0761	0.00714	0.698	1.33414	<	3.52	0.593	0.13	0.00		3.37
C-33-3	1.06	< 0.0963	0.0554	0.918	2.0334	<	3.77	0	0.15	0.01		1.07
C-33-4	1.38		0.135	1.25	2.765	<	3.71	0.147	0.22	0.01	<	0.394
C-33-5	1.53		0.0652	0.983	2.5782	<	3.89	0	0.20	0.01	<	0.384
S-50-1	1.2		0.0469	0.929	2.1759	<	3.59	0.413	0.19	0.01	<	0.366
S-50-2	3.24		0.119	1.27	4.629	<	3.89	0	0.35	0.01		0.970
S-50-3	1.48	< 0.0939	0.0766	0.978	2.5346	<	2.67	0	0.19	0.01		1.15
S-50-4	3.83		0.253	1.32	5.403	<	2.45	0	0.42	0.02		2.60
S-50-5	1.66	< 0.0906	0.0555	1.19	2.9055	<	2.77	0	0.22	0.01		2.90
C-43-1	1.75	< 0.0858	0.0461	0.849	2.6451	<	2.79	0	0.20	0.01		0.751
C-43-2	1.74	< 0.0724	0.0568	0.983	2.7798	<	2.69	0	0.21	0.01	<	0.380
C-43-3	1.19	< 0.0944	0.0436	0.664	1.8976	<	2.76	0	0.14	0.01	<	0.376
C-43-4	1.76	< 0.1120	0.0604	0.905	2.7254	<	2.57	0	0.21	0.01		1.79
C-43-5	1.23	< 0.0888	0.0882	0.802	2.1202	<	2.65	0	0.16	0.01		0.949
C-43-6	1.32	< 0.1270	0.0974	0.743	2.1604	<	2.68	0	0.17	0.01	<	0.363
C-39-1	1.96	< 0.1060	0.0675	1.3	3.3275	<	2.54	0	0.25	0.01		0.721
C-39-2	1.76		0.221	1.1	3.081	<	2.70	0	0.24	0.01	<	0.369
C-39-3	1.03		0.0921	0.692	1.8141	<	2.83	0	0.14	0.01		0.851
C-39-4	0.873		0.177	0.721	1.771	<	2.81	0.0304	0.14	0.01	<	0.397
C-39-5	1.35		0.16	0.835	2.345	<	2.69	0.619	0.22	0.01	<	0.388
C-67-1	0.763	< 0.0754	0.012	0.707	1.482	<	2.72	0	0.11	0.00	<	0.378
C-67-2	1.1		0.0777	0.68	1.8577	<	3.41	0	0.14	0.01		1.48
C-67-3	0.861	< 0.0972	0.0618	0.746	1.6688	<	3.12	0	0.13	0.01	<	0.389
C-59-4	0.739	< 0.1280	0.00589	0.736	1.48089	<	2.93	0.221	0.12	0.00	<	0.385
C-59-5	1.4	< 0.1150	0.114	0.959	2.473	<	2.95	0	0.19	0.01		2.59
C-59-6	0.952	< 0.1210	0.0113	0.582	1.5453	<	3.20	0	0.12	0.00		1.76
C-51-7	1.53		0.0602	0.871	2.4612	<	2.70	0	0.19	0.01		0.926
C-51-8	1.65	< 0.0570	0.038	0.781	2.469	<	3.19	0	0.19	0.01		4.49
C-51-9	1.04	< 0.0954	0.0151	0.633	1.6881	<	3.13	0	0.13	0.00		3.08
C-58-10	0.714	< 0.9900	0.045	0.764	1.523	<	3.08	0.547	0.14	0.01		1.27
C-58-11	1.09	< 0.1550	0.00708	0.913	2.01008	<	2.94	0.309	0.17	0.01		1.29
C-58-12	1.28	< 0.0673	0.0388	0.983	2.3018	<	3.11	0	0.17	0.01		0.375
C-52-13	1.31	< 0.0988	0.0906	1.04	2.4406	<	3.10	0.0198	0.19	0.01		0.820
C-52-14	0.898	< 0.0863	0.0237	0.732	1.6537	<	3.10	0.0994	0.13	0.00		0.596
C-52-15	4.22		0.159	1.42	5.799	<	3.04	0	0.45	0.01		1.77
C-51-16	0.853		0.044	0.661	1.558	<	3.09	0	0.12	0.01		1.16



Residential Limits in Soil (per RA-433)		
U234	13	pCi/g
U235	8	pCi/g
U238	14	pCi/g
Tc-99	19	pCi/g
Fluoride	600	mg/kg
PCE	0.0023	mg/kg

Notes:

<1.0 SOF, but conservatively remediated

>1.0 SOF, remediated

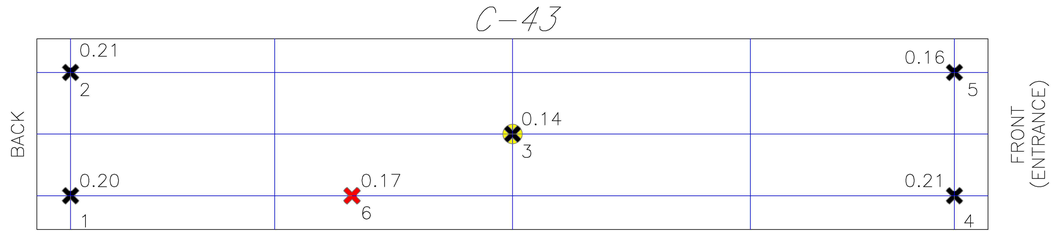
Excavation area

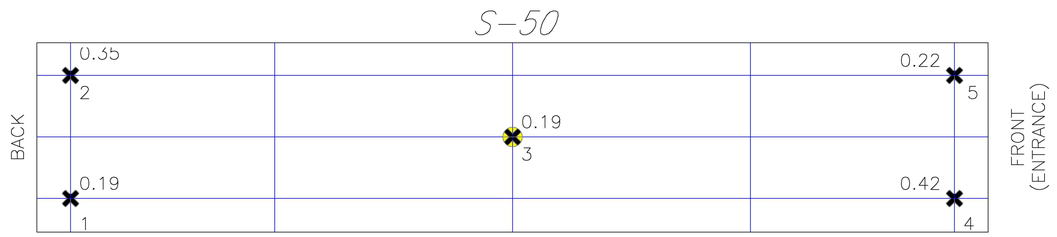
Negative values reflected as zero

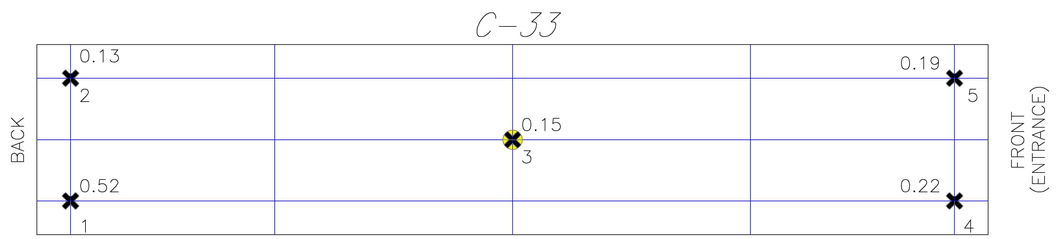
S-3 (A-E) samples were second round sampling to bound the contaminated area

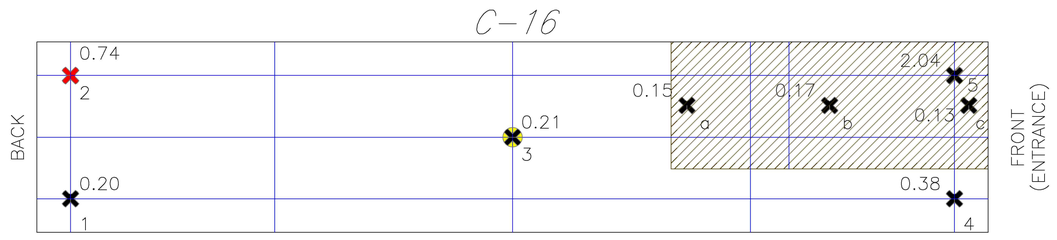
S-3 (a-c) samples were third round confirmatory sampling, following excavation, to ensure full remediation to residential levels

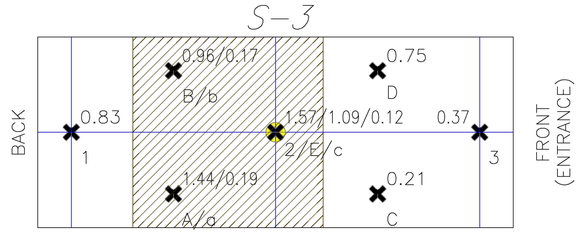
C-16 (a-c) samples were confirmatory sampling, following excavation, to ensure full remediation to residential levels

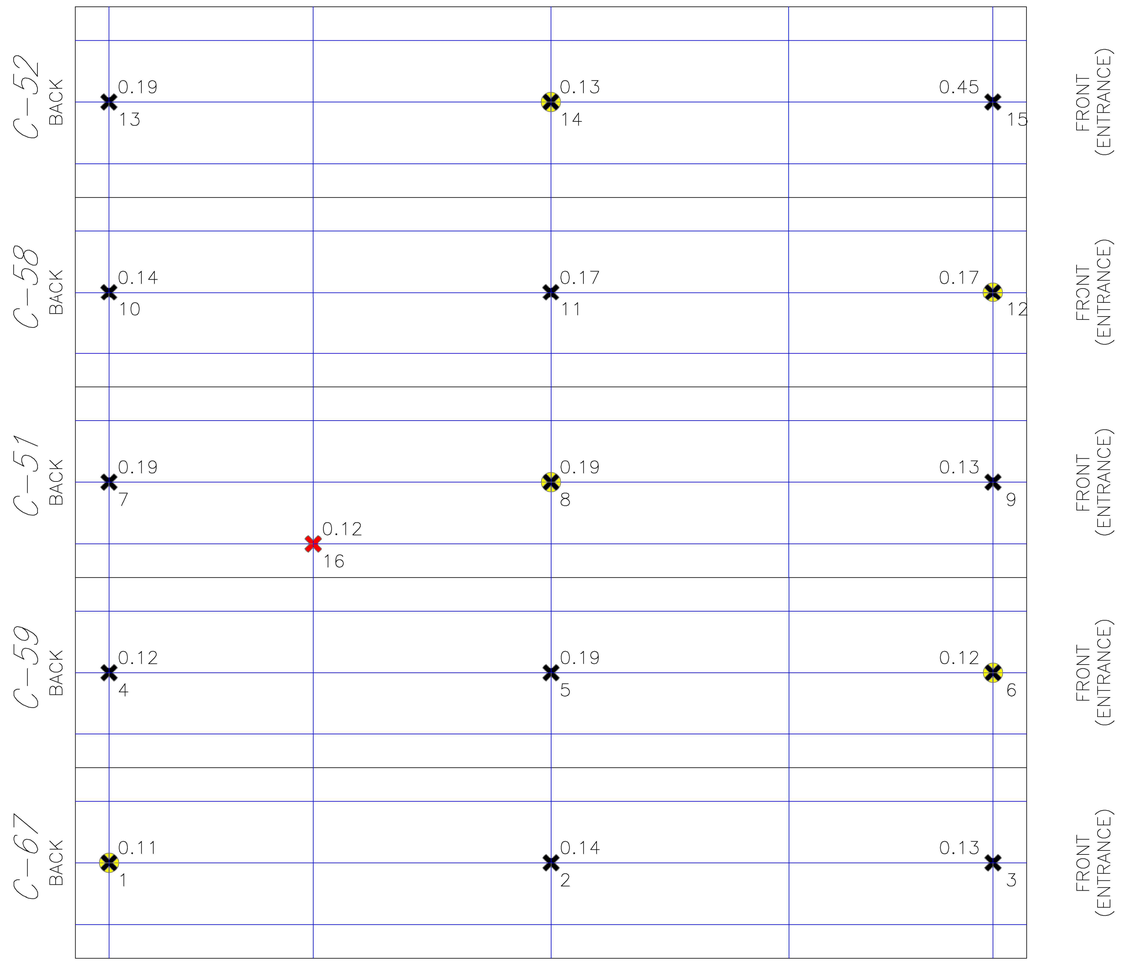


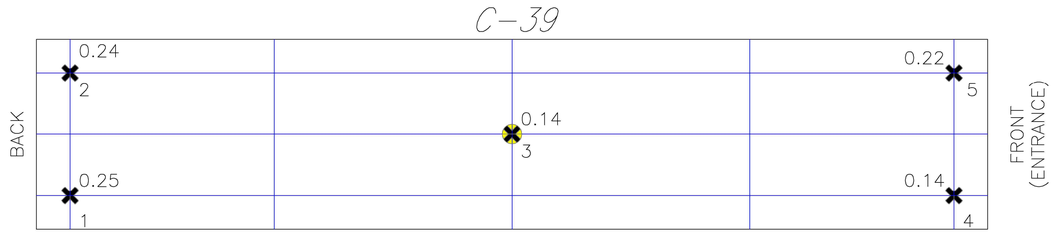












BIAS SAMPLE

SYSTEMATIC SAMPLE

SYSTEMATIC SAMPLE WITH VOC

CONTAMINATED SOIL REMOVED TO 2 FEET DEPTH

NOTES

1) S-3 (A-E) WERE SECOND ROUND SAMPLES TO BOUND THE CONTAMINATION.

2) S-3 (a-c) AND C-16 (a-c) WERE CONFIRMATORY SAMPLES FOLLOWING EXCAVATION TO SHOW FULL REMEDIATION.

CHANGE

NONE

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

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

AREA / PROCESS

TITLE
SUM OF FRACTIONS OF
ISOTOPIC URANIUM ININ SOIL BENEATH SEA-LANDS

SIZE	RECN NO	DWG NO	REV
F		N/A	1
SCALE N/A		DWG TYPE N/A	SHEET 01 OF 01 SHEETS

AUTOCAD DRAWING
DO NOT REVISE MANUALLY

Attachment B

Southern Storage Area Operable Unit Soil Sampling- GEL Analytical Results

Initial Sampling Event

S-3	C-16	C-43	C-58
S-50	C-33	C-51	C-59
	C-39	C-52	C-67

GEL Analytical Results
Sampling conducted: January 23, 2020
GEL Work Order: 502680
Report Date: February 12, 2020

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

February 12, 2020

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

Re: ENV-CONSENTA-4500778461
Work Order: 502680

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 29, 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. 4707.

Sincerely,

Katelyn Gray

Katelyn Gray
Project Manager

Purchase Order: PO
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: 502680 GEL Work Order: 502680

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, Katelyn Gray.

Reviewed by Katelyn Gray

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

Certificate of Analysis

Report Date: February 12, 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:	S-3-1	Project:	WNUC01519
Sample ID:	502680001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 12:42		
Receive Date:	29-JAN-20		
Collector:	Client		
Moisture:	9.75%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.19	0.380	1.12	mg/kg	10.1	1	CH5	02/01/20	0902	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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: S-3-2
Sample ID: 502680002
Matrix: Solid
Collect Date: 23-JAN-20 12:47
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.91%

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		4.16	0.376	1.10	mg/kg	9.95	1	CH5	02/01/20	1031	1965068	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.336	1.01	ug/kg	0.909	1	JEB	02/03/20	1906	1965433	2
1,1,2,2-Tetrachloroethane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,1,2-Trichloroethane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,1-Dichloroethane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,1-Dichloroethylene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2,3-Trichlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2,4-Trichlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2-Dibromo-3-chloropropane	U	ND	0.505	1.01	ug/kg	0.909	1					
1,2-Dibromoethane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2-Dichlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2-Dichloroethane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,2-Dichloropropane	U	ND	0.336	1.01	ug/kg	0.909	1					
1,3-Dichlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,4-Dichlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
1,4-Dioxane	U	ND	16.8	50.5	ug/kg	0.909	1					
2-Butanone	U	ND	1.68	5.05	ug/kg	0.909	1					
2-Hexanone	U	ND	1.68	5.05	ug/kg	0.909	1					
4-Methyl-2-pentanone	U	ND	1.68	5.05	ug/kg	0.909	1					
Acetone	J	4.85	1.68	5.05	ug/kg	0.909	1					
Benzene	U	ND	0.336	1.01	ug/kg	0.909	1					
Bromochloromethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Bromodichloromethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Bromoform	U	ND	0.336	1.01	ug/kg	0.909	1					
Bromomethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Carbon disulfide	U	ND	1.68	5.05	ug/kg	0.909	1					
Carbon tetrachloride	U	ND	0.336	1.01	ug/kg	0.909	1					
Chlorobenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
Chloroethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Chloroform	U	ND	0.336	1.01	ug/kg	0.909	1					
Chloromethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Cyclohexane	U	ND	0.336	1.01	ug/kg	0.909	1					
Dibromochloromethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Dichlorodifluoromethane	U	ND	0.336	1.01	ug/kg	0.909	1					

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Certificate of Analysis

Report Date: February 12, 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: S-3-2 Project: WNUC01519
Sample ID: 502680002 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"												
Ethylbenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
Isopropylbenzene	U	ND	0.336	1.01	ug/kg	0.909	1					
Methyl acetate	U	ND	1.68	5.05	ug/kg	0.909	1					
Methylcyclohexane	U	ND	0.336	1.01	ug/kg	0.909	1					
Methylene chloride	U	ND	1.68	5.05	ug/kg	0.909	1					
Styrene	U	ND	0.336	1.01	ug/kg	0.909	1					
Tetrachloroethylene	U	ND	0.336	1.01	ug/kg	0.909	1					
Toluene	U	ND	0.336	1.01	ug/kg	0.909	1					
Trichloroethylene	U	ND	0.336	1.01	ug/kg	0.909	1					
Trichlorofluoromethane	U	ND	0.336	1.01	ug/kg	0.909	1					
Trichlorotrifluoroethane	U	ND	1.68	5.05	ug/kg	0.909	1					
Vinyl chloride	U	ND	0.336	1.01	ug/kg	0.909	1					
cis-1,2-Dichloroethylene	U	ND	0.336	1.01	ug/kg	0.909	1					
cis-1,3-Dichloropropylene	U	ND	0.336	1.01	ug/kg	0.909	1					
m,p-Xylenes	U	ND	0.673	2.02	ug/kg	0.909	1					
o-Xylene	U	ND	0.336	1.01	ug/kg	0.909	1					
tert-Butyl methyl ether	U	ND	0.336	1.01	ug/kg	0.909	1					
trans-1,2-Dichloroethylene	U	ND	0.336	1.01	ug/kg	0.909	1					
trans-1,3-Dichloropropylene	U	ND	0.336	1.01	ug/kg	0.909	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1505	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	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	91	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	50.1 ug/kg	50.0	99	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	48.0 ug/kg	50.0	95	(81%-120%)

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Report Date: February 12, 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:	S-3-2	Project:	WNUC01519
Sample ID:	502680002	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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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Certificate of Analysis

Report Date: February 12, 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:	S-3-3	Project:	WNUC01519
Sample ID:	502680003	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 12:54		
Receive Date:	29-JAN-20		
Collector:	Client		
Moisture:	8.68%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.775	0.373	1.10	mg/kg	10.0	1	CH5	02/01/20	1201	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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-16-1
Sample ID: 502680004
Matrix: Solid
Collect Date: 23-JAN-20 13:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

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	U	ND	0.385	1.13	mg/kg	10.1	1	CH5	02/01/20	1231	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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-16-2
Sample ID: 502680005
Matrix: Solid
Collect Date: 23-JAN-20 13:08
Receive Date: 29-JAN-20
Collector: Client
Moisture: 17.9%

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	J	0.925	0.414	1.22	mg/kg	10.0	1	JLD1	02/08/20	1209	1967554	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235		136	2.38	16.6	ug/kg	97.7	2	SKJ	02/12/20	0743	1964991	2
Uranium-238		5870	15.7	47.6	ug/kg	97.7	2					
Uranium-234	U	ND	2.38	11.9	ug/kg	97.7	2	SKJ	02/11/20	1047	1964991	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.369	1.11	ug/kg	0.909	1	JEB	02/03/20	2221	1965433	4
1,1,2,2-Tetrachloroethane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,1,2-Trichloroethane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,1-Dichloroethane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,1-Dichloroethylene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2,3-Trichlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2,4-Trichlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2-Dibromo-3-chloropropane	U	ND	0.553	1.11	ug/kg	0.909	1					
1,2-Dibromoethane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2-Dichlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2-Dichloroethane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,2-Dichloropropane	U	ND	0.369	1.11	ug/kg	0.909	1					
1,3-Dichlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,4-Dichlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
1,4-Dioxane	U	ND	18.4	55.3	ug/kg	0.909	1					
2-Butanone	U	ND	1.85	5.53	ug/kg	0.909	1					
2-Hexanone	U	ND	1.85	5.53	ug/kg	0.909	1					
4-Methyl-2-pentanone	U	ND	1.85	5.53	ug/kg	0.909	1					
Acetone		6.23	1.85	5.53	ug/kg	0.909	1					
Benzene	U	ND	0.369	1.11	ug/kg	0.909	1					
Bromochloromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Bromodichloromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Bromoform	U	ND	0.369	1.11	ug/kg	0.909	1					
Bromomethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Carbon disulfide	U	ND	1.85	5.53	ug/kg	0.909	1					
Carbon tetrachloride	U	ND	0.369	1.11	ug/kg	0.909	1					
Chlorobenzene	U	ND	0.369	1.11	ug/kg	0.909	1					

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Report Date: February 12, 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-16-2 Project: WNUC01519
Sample ID: 502680005 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	0.369	1.11	ug/kg	0.909	1					
Chloroform	U	ND	0.369	1.11	ug/kg	0.909	1					
Chloromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Cyclohexane	U	ND	0.369	1.11	ug/kg	0.909	1					
Dibromochloromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Dichlorodifluoromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Ethylbenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
Isopropylbenzene	U	ND	0.369	1.11	ug/kg	0.909	1					
Methyl acetate	U	ND	1.85	5.53	ug/kg	0.909	1					
Methylcyclohexane	U	ND	0.369	1.11	ug/kg	0.909	1					
Methylene chloride	U	ND	1.85	5.53	ug/kg	0.909	1					
Styrene	U	ND	0.369	1.11	ug/kg	0.909	1					
Tetrachloroethylene	U	ND	0.369	1.11	ug/kg	0.909	1					
Toluene	U	ND	0.369	1.11	ug/kg	0.909	1					
Trichloroethylene	U	ND	0.369	1.11	ug/kg	0.909	1					
Trichlorofluoromethane	U	ND	0.369	1.11	ug/kg	0.909	1					
Trichlorotrifluoroethane	U	ND	1.85	5.53	ug/kg	0.909	1					
Vinyl chloride	U	ND	0.369	1.11	ug/kg	0.909	1					
cis-1,2-Dichloroethylene	U	ND	0.369	1.11	ug/kg	0.909	1					
cis-1,3-Dichloropropylene	U	ND	0.369	1.11	ug/kg	0.909	1					
m,p-Xylenes	U	ND	0.738	2.21	ug/kg	0.909	1					
o-Xylene	U	ND	0.369	1.11	ug/kg	0.909	1					
tert-Butyl methyl ether	U	ND	0.369	1.11	ug/kg	0.909	1					
trans-1,2-Dichloroethylene	U	ND	0.369	1.11	ug/kg	0.909	1					
trans-1,3-Dichloropropylene	U	ND	0.369	1.11	ug/kg	0.909	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	02/03/20	0910	1964990
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	2001	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

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Certificate of Analysis

Report Date: February 12, 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-16-2	Project:	WNUC01519
Sample ID:	502680005	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	Time	Batch	Method

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"	49.3 ug/kg	50.0	89	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	53.7 ug/kg	50.0	97	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	52.7 ug/kg	50.0	95	(81%-120%)

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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Certificate of Analysis

Report Date: February 12, 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-16-3
Sample ID: 502680006
Matrix: Solid
Collect Date: 23-JAN-20 13:12
Receive Date: 29-JAN-20
Collector: Client
Moisture: 7.74%

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	J	1.11	0.381	1.12	mg/kg	10.3	1	CH5	02/01/20	1400	1965068	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.301	0.903	ug/kg	0.833	1	JEB	02/03/20	1954	1965433	2
1,1,2,2-Tetrachloroethane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,1,2-Trichloroethane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,1-Dichloroethane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,1-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2,3-Trichlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2,4-Trichlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2-Dibromo-3-chloropropane	U	ND	0.452	0.903	ug/kg	0.833	1					
1,2-Dibromoethane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2-Dichloroethane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,2-Dichloropropane	U	ND	0.301	0.903	ug/kg	0.833	1					
1,3-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,4-Dichlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
1,4-Dioxane	U	ND	15.1	45.2	ug/kg	0.833	1					
2-Butanone	U	ND	1.51	4.52	ug/kg	0.833	1					
2-Hexanone	U	ND	1.51	4.52	ug/kg	0.833	1					
4-Methyl-2-pentanone	U	ND	1.51	4.52	ug/kg	0.833	1					
Acetone	J	2.24	1.51	4.52	ug/kg	0.833	1					
Benzene	U	ND	0.301	0.903	ug/kg	0.833	1					
Bromochloromethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Bromodichloromethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Bromoform	U	ND	0.301	0.903	ug/kg	0.833	1					
Bromomethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Carbon disulfide	U	ND	1.51	4.52	ug/kg	0.833	1					
Carbon tetrachloride	U	ND	0.301	0.903	ug/kg	0.833	1					
Chlorobenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
Chloroethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Chloroform	U	ND	0.301	0.903	ug/kg	0.833	1					
Chloromethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Cyclohexane	U	ND	0.301	0.903	ug/kg	0.833	1					
Dibromochloromethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Dichlorodifluoromethane	U	ND	0.301	0.903	ug/kg	0.833	1					

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Report Date: February 12, 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-16-3 Project: WNUC01519
Sample ID: 502680006 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"												
Ethylbenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
Isopropylbenzene	U	ND	0.301	0.903	ug/kg	0.833	1					
Methyl acetate	U	ND	1.51	4.52	ug/kg	0.833	1					
Methylcyclohexane	U	ND	0.301	0.903	ug/kg	0.833	1					
Methylene chloride	U	ND	1.51	4.52	ug/kg	0.833	1					
Styrene	U	ND	0.301	0.903	ug/kg	0.833	1					
Tetrachloroethylene	U	ND	0.301	0.903	ug/kg	0.833	1					
Toluene	U	ND	0.301	0.903	ug/kg	0.833	1					
Trichloroethylene	U	ND	0.301	0.903	ug/kg	0.833	1					
Trichlorofluoromethane	U	ND	0.301	0.903	ug/kg	0.833	1					
Trichlorotrifluoroethane	U	ND	1.51	4.52	ug/kg	0.833	1					
Vinyl chloride	U	ND	0.301	0.903	ug/kg	0.833	1					
cis-1,2-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.833	1					
cis-1,3-Dichloropropylene	U	ND	0.301	0.903	ug/kg	0.833	1					
m,p-Xylenes	U	ND	0.602	1.81	ug/kg	0.833	1					
o-Xylene	U	ND	0.301	0.903	ug/kg	0.833	1					
tert-Butyl methyl ether	U	ND	0.301	0.903	ug/kg	0.833	1					
trans-1,2-Dichloroethylene	U	ND	0.301	0.903	ug/kg	0.833	1					
trans-1,3-Dichloropropylene	U	ND	0.301	0.903	ug/kg	0.833	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1507	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	41.4 ug/kg	50.0	92	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.3 ug/kg	50.0	96	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	42.0 ug/kg	50.0	93	(81%-120%)

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Report Date: February 12, 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-16-3	Project:	WNUC01519
Sample ID:	502680006	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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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Address : PO Drawer R

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

Client Sample ID: C-16-4
Sample ID: 502680007
Matrix: Solid
Collect Date: 23-JAN-20 13:20
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.32%

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	U	ND	0.375	1.10	mg/kg	10.0	1	CH5	02/01/20	1430	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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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Address : PO Drawer R

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

Client Sample ID: C-16-5
Sample ID: 502680008
Matrix: Solid
Collect Date: 23-JAN-20 13:24
Receive Date: 29-JAN-20
Collector: Client
Moisture: 14.6%

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		10.4	0.392	1.15	mg/kg	9.85	1	CH5	02/01/20	1500	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-33-1
Sample ID: 502680009
Matrix: Solid
Collect Date: 23-JAN-20 13:40
Receive Date: 29-JAN-20
Collector: Client
Moisture: 18.2%

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		1.86	0.420	1.23	mg/kg	10.1	1	CH5	02/01/20	1530	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-33-2
Sample ID: 502680010
Matrix: Solid
Collect Date: 23-JAN-20 13:45
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.25%

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		3.37	0.385	1.13	mg/kg	10.3	1	CH5	02/01/20	1600	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-33-3
Sample ID: 502680011
Matrix: Solid
Collect Date: 23-JAN-20 13:49
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.87%

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	J	1.07	0.375	1.10	mg/kg	9.95	1	CH5	02/01/20	1630	1965068	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.298	0.895	ug/kg	0.806	1	JEB	02/03/20	2019	1965433	2
1,1,2,2-Tetrachloroethane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,1,2-Trichloroethane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,1-Dichloroethane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,1-Dichloroethylene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2,3-Trichlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2,4-Trichlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2-Dibromo-3-chloropropane	U	ND	0.447	0.895	ug/kg	0.806	1					
1,2-Dibromoethane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2-Dichlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2-Dichloroethane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,2-Dichloropropane	U	ND	0.298	0.895	ug/kg	0.806	1					
1,3-Dichlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,4-Dichlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
1,4-Dioxane	U	ND	14.9	44.7	ug/kg	0.806	1					
2-Butanone	U	ND	1.49	4.47	ug/kg	0.806	1					
2-Hexanone	U	ND	1.49	4.47	ug/kg	0.806	1					
4-Methyl-2-pentanone	U	ND	1.49	4.47	ug/kg	0.806	1					
Acetone	J	3.29	1.49	4.47	ug/kg	0.806	1					
Benzene	U	ND	0.298	0.895	ug/kg	0.806	1					
Bromochloromethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Bromodichloromethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Bromoform	U	ND	0.298	0.895	ug/kg	0.806	1					
Bromomethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Carbon disulfide	U	ND	1.49	4.47	ug/kg	0.806	1					
Carbon tetrachloride	U	ND	0.298	0.895	ug/kg	0.806	1					
Chlorobenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
Chloroethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Chloroform	U	ND	0.298	0.895	ug/kg	0.806	1					
Chloromethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Cyclohexane	U	ND	0.298	0.895	ug/kg	0.806	1					
Dibromochloromethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Dichlorodifluoromethane	U	ND	0.298	0.895	ug/kg	0.806	1					

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Address : PO Drawer R

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

Client Sample ID: C-33-3 Project: WNUC01519
Sample ID: 502680011 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"												
Ethylbenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
Isopropylbenzene	U	ND	0.298	0.895	ug/kg	0.806	1					
Methyl acetate	U	ND	1.49	4.47	ug/kg	0.806	1					
Methylcyclohexane	U	ND	0.298	0.895	ug/kg	0.806	1					
Methylene chloride	U	ND	1.49	4.47	ug/kg	0.806	1					
Styrene	U	ND	0.298	0.895	ug/kg	0.806	1					
Tetrachloroethylene	U	ND	0.298	0.895	ug/kg	0.806	1					
Toluene	U	ND	0.298	0.895	ug/kg	0.806	1					
Trichloroethylene	U	ND	0.298	0.895	ug/kg	0.806	1					
Trichlorofluoromethane	U	ND	0.298	0.895	ug/kg	0.806	1					
Trichlorotrifluoroethane	U	ND	1.49	4.47	ug/kg	0.806	1					
Vinyl chloride	U	ND	0.298	0.895	ug/kg	0.806	1					
cis-1,2-Dichloroethylene	U	ND	0.298	0.895	ug/kg	0.806	1					
cis-1,3-Dichloropropylene	U	ND	0.298	0.895	ug/kg	0.806	1					
m,p-Xylenes	U	ND	0.597	1.79	ug/kg	0.806	1					
o-Xylene	U	ND	0.298	0.895	ug/kg	0.806	1					
tert-Butyl methyl ether	U	ND	0.298	0.895	ug/kg	0.806	1					
trans-1,2-Dichloroethylene	U	ND	0.298	0.895	ug/kg	0.806	1					
trans-1,3-Dichloropropylene	U	ND	0.298	0.895	ug/kg	0.806	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1508	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	41.2 ug/kg	50.0	92	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.4 ug/kg	50.0	104	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	43.3 ug/kg	50.0	97	(81%-120%)

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

Client Sample ID:	C-33-3	Project:	WNUC01519
Sample ID:	502680011	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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

Client Sample ID: C-33-4
Sample ID: 502680012
Matrix: Solid
Collect Date: 23-JAN-20 13:55
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.1%

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	U	ND	0.394	1.16	mg/kg	10.1	1	CH5	02/01/20	1702	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-33-5
Sample ID: 502680013
Matrix: Solid
Collect Date: 23-JAN-20 13:59
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.1%

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	U	ND	0.384	1.13	mg/kg	9.83	1	CH5	02/01/20	1731	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID:	S-50-1	Project:	WNUC01519
Sample ID:	502680014	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 14:08		
Receive Date:	29-JAN-20		
Collector:	Client		
Moisture:	9.69%		

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	CH5	02/01/20	1801	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID:	S-50-2	Project:	WNUC01519
Sample ID:	502680015	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 14:12		
Receive Date:	29-JAN-20		
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	J	0.970	0.382	1.12	mg/kg	10.1	1	CH5	02/01/20	1831	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: S-50-3
Sample ID: 502680016
Matrix: Solid
Collect Date: 23-JAN-20 14:18
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.4%

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		1.15	0.388	1.14	mg/kg	10.0	1	JLD1	02/08/20	1339	1967554	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235		29.1	2.26	15.8	ug/kg	98.8	2	SKJ	02/11/20	0855	1964991	2
Uranium-238		2080	14.9	45.1	ug/kg	98.8	2					
Uranium-234	U	ND	2.26	11.3	ug/kg	98.8	2	SKJ	02/11/20	1055	1964991	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.346	1.04	ug/kg	0.909	1	JEB	02/03/20	2044	1965433	4
1,1,2,2-Tetrachloroethane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,1,2-Trichloroethane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,1-Dichloroethane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,1-Dichloroethylene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2,3-Trichlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2,4-Trichlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2-Dibromo-3-chloropropane	U	ND	0.519	1.04	ug/kg	0.909	1					
1,2-Dibromoethane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2-Dichlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2-Dichloroethane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,2-Dichloropropane	U	ND	0.346	1.04	ug/kg	0.909	1					
1,3-Dichlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,4-Dichlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
1,4-Dioxane	U	ND	17.3	51.9	ug/kg	0.909	1					
2-Butanone	U	ND	1.73	5.19	ug/kg	0.909	1					
2-Hexanone	U	ND	1.73	5.19	ug/kg	0.909	1					
4-Methyl-2-pentanone	U	ND	1.73	5.19	ug/kg	0.909	1					
Acetone	J	3.73	1.73	5.19	ug/kg	0.909	1					
Benzene	U	ND	0.346	1.04	ug/kg	0.909	1					
Bromochloromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Bromodichloromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Bromoform	U	ND	0.346	1.04	ug/kg	0.909	1					
Bromomethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Carbon disulfide	U	ND	1.73	5.19	ug/kg	0.909	1					
Carbon tetrachloride	U	ND	0.346	1.04	ug/kg	0.909	1					
Chlorobenzene	U	ND	0.346	1.04	ug/kg	0.909	1					

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Certificate of Analysis

Report Date: February 12, 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: S-50-3 Project: WNUC01519
Sample ID: 502680016 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	0.346	1.04	ug/kg	0.909	1					
Chloroform	U	ND	0.346	1.04	ug/kg	0.909	1					
Chloromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Cyclohexane	U	ND	0.346	1.04	ug/kg	0.909	1					
Dibromochloromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Dichlorodifluoromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Ethylbenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
Isopropylbenzene	U	ND	0.346	1.04	ug/kg	0.909	1					
Methyl acetate	U	ND	1.73	5.19	ug/kg	0.909	1					
Methylcyclohexane	U	ND	0.346	1.04	ug/kg	0.909	1					
Methylene chloride	U	ND	1.73	5.19	ug/kg	0.909	1					
Styrene	U	ND	0.346	1.04	ug/kg	0.909	1					
Tetrachloroethylene	U	ND	0.346	1.04	ug/kg	0.909	1					
Toluene	U	ND	0.346	1.04	ug/kg	0.909	1					
Trichloroethylene	U	ND	0.346	1.04	ug/kg	0.909	1					
Trichlorofluoromethane	U	ND	0.346	1.04	ug/kg	0.909	1					
Trichlorotrifluoroethane	U	ND	1.73	5.19	ug/kg	0.909	1					
Vinyl chloride	U	ND	0.346	1.04	ug/kg	0.909	1					
cis-1,2-Dichloroethylene	U	ND	0.346	1.04	ug/kg	0.909	1					
cis-1,3-Dichloropropylene	U	ND	0.346	1.04	ug/kg	0.909	1					
m,p-Xylenes	U	ND	0.692	2.08	ug/kg	0.909	1					
o-Xylene	U	ND	0.346	1.04	ug/kg	0.909	1					
tert-Butyl methyl ether	J	0.426	0.346	1.04	ug/kg	0.909	1					
trans-1,2-Dichloroethylene	U	ND	0.346	1.04	ug/kg	0.909	1					
trans-1,3-Dichloropropylene	U	ND	0.346	1.04	ug/kg	0.909	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	02/03/20	0910	1964990
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1509	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

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

Client Sample ID: S-50-3 Project: WNUC01519
Sample ID: 502680016 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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	90	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	52.5 ug/kg	50.0	101	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	49.0 ug/kg	50.0	94	(81%-120%)

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

Client Sample ID:	S-50-4	Project:	WNUC01519
Sample ID:	502680017	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 14:23		
Receive Date:	29-JAN-20		
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		2.60	0.373	1.10	mg/kg	9.69	1	CH5	02/01/20	2000	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID:	S-50-5	Project:	WNUC01519
Sample ID:	502680018	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 14:27		
Receive Date:	29-JAN-20		
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		2.90	0.395	1.16	mg/kg	10.3	1	CH5	02/01/20	2030	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-43-1
Sample ID: 502680019
Matrix: Solid
Collect Date: 23-JAN-20 14:38
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13%

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	J	0.751	0.376	1.10	mg/kg	9.62	1	CH5	02/01/20	2100	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-43-2
Sample ID: 502680020
Matrix: Solid
Collect Date: 23-JAN-20 14:42
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.3%

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	U	ND	0.380	1.12	mg/kg	10.0	1	CH5	02/01/20	2130	1965068	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2216	1965067

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-43-3
Sample ID: 502680021
Matrix: Solid
Collect Date: 23-JAN-20 14:46
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.7%

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	U	ND	0.376	1.11	mg/kg	9.76	1	LXA2	01/31/20	2358	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.309	0.929	ug/kg	0.820	1	JEB	02/03/20	2108	1965433	2
1,1,2,2-Tetrachloroethane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,1,2-Trichloroethane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,1-Dichloroethane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,1-Dichloroethylene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2,3-Trichlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2,4-Trichlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2-Dibromo-3-chloropropane	U	ND	0.464	0.929	ug/kg	0.820	1					
1,2-Dibromoethane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2-Dichlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2-Dichloroethane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,2-Dichloropropane	U	ND	0.309	0.929	ug/kg	0.820	1					
1,3-Dichlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,4-Dichlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
1,4-Dioxane	U	ND	15.5	46.4	ug/kg	0.820	1					
2-Butanone	U	ND	1.55	4.64	ug/kg	0.820	1					
2-Hexanone	U	ND	1.55	4.64	ug/kg	0.820	1					
4-Methyl-2-pentanone	U	ND	1.55	4.64	ug/kg	0.820	1					
Acetone	J	2.51	1.55	4.64	ug/kg	0.820	1					
Benzene	U	ND	0.309	0.929	ug/kg	0.820	1					
Bromochloromethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Bromodichloromethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Bromoform	U	ND	0.309	0.929	ug/kg	0.820	1					
Bromomethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Carbon disulfide	U	ND	1.55	4.64	ug/kg	0.820	1					
Carbon tetrachloride	U	ND	0.309	0.929	ug/kg	0.820	1					
Chlorobenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
Chloroethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Chloroform	U	ND	0.309	0.929	ug/kg	0.820	1					
Chloromethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Cyclohexane	U	ND	0.309	0.929	ug/kg	0.820	1					
Dibromochloromethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Dichlorodifluoromethane	U	ND	0.309	0.929	ug/kg	0.820	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-43-3 Project: WNUC01519
Sample ID: 502680021 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"												
Ethylbenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
Isopropylbenzene	U	ND	0.309	0.929	ug/kg	0.820	1					
Methyl acetate	U	ND	1.55	4.64	ug/kg	0.820	1					
Methylcyclohexane	U	ND	0.309	0.929	ug/kg	0.820	1					
Methylene chloride	U	ND	1.55	4.64	ug/kg	0.820	1					
Styrene	U	ND	0.309	0.929	ug/kg	0.820	1					
Tetrachloroethylene	U	ND	0.309	0.929	ug/kg	0.820	1					
Toluene	U	ND	0.309	0.929	ug/kg	0.820	1					
Trichloroethylene	U	ND	0.309	0.929	ug/kg	0.820	1					
Trichlorofluoromethane	U	ND	0.309	0.929	ug/kg	0.820	1					
Trichlorotrifluoroethane	U	ND	1.55	4.64	ug/kg	0.820	1					
Vinyl chloride	U	ND	0.309	0.929	ug/kg	0.820	1					
cis-1,2-Dichloroethylene	U	ND	0.309	0.929	ug/kg	0.820	1					
cis-1,3-Dichloropropylene	U	ND	0.309	0.929	ug/kg	0.820	1					
m,p-Xylenes	U	ND	0.619	1.86	ug/kg	0.820	1					
o-Xylene	U	ND	0.309	0.929	ug/kg	0.820	1					
tert-Butyl methyl ether	U	ND	0.309	0.929	ug/kg	0.820	1					
trans-1,2-Dichloroethylene	U	ND	0.309	0.929	ug/kg	0.820	1					
trans-1,3-Dichloropropylene	U	ND	0.309	0.929	ug/kg	0.820	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1510	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	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	92	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	49.1 ug/kg	50.0	106	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.9 ug/kg	50.0	97	(81%-120%)

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

Client Sample ID:	C-43-3	Project:	WNUC01519
Sample ID:	502680021	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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

Client Sample ID:	C-43-4	Project:	WNUC01519
Sample ID:	502680022	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	23-JAN-20 14:51		
Receive Date:	29-JAN-20		
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		1.79	0.383	1.13	mg/kg	9.90	1	LXA2	02/01/20	0128	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-43-5
Sample ID: 502680023
Matrix: Solid
Collect Date: 23-JAN-20 14:55
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.8%

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	J	0.949	0.385	1.13	mg/kg	9.88	1	LXA2	02/01/20	0257	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-43-6
Sample ID: 502680024
Matrix: Solid
Collect Date: 23-JAN-20 14:59
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.79%

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	U	ND	0.363	1.07	mg/kg	9.64	1	JLD1	02/08/20	1409	1967554	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235		33.2	2.19	15.3	ug/kg	98.6	2	SKJ	02/11/20	0857	1964991	2
Uranium-238		1760	14.4	43.7	ug/kg	98.6	2					
Uranium-234	U	ND	2.19	10.9	ug/kg	98.6	2	SKJ	02/11/20	1057	1964991	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.280	0.840	ug/kg	0.758	1	JEB	02/03/20	2133	1965433	4
1,1,2,2-Tetrachloroethane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,1,2-Trichloroethane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,1-Dichloroethane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,1-Dichloroethylene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2,3-Trichlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2,4-Trichlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2-Dibromo-3-chloropropane	U	ND	0.420	0.840	ug/kg	0.758	1					
1,2-Dibromoethane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2-Dichlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2-Dichloroethane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,2-Dichloropropane	U	ND	0.280	0.840	ug/kg	0.758	1					
1,3-Dichlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,4-Dichlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					
1,4-Dioxane	U	ND	14.0	42.0	ug/kg	0.758	1					
2-Butanone	U	ND	1.40	4.20	ug/kg	0.758	1					
2-Hexanone	U	ND	1.40	4.20	ug/kg	0.758	1					
4-Methyl-2-pentanone	U	ND	1.40	4.20	ug/kg	0.758	1					
Acetone		15.6	1.40	4.20	ug/kg	0.758	1					
Benzene	U	ND	0.280	0.840	ug/kg	0.758	1					
Bromochloromethane	U	ND	0.280	0.840	ug/kg	0.758	1					
Bromodichloromethane	U	ND	0.280	0.840	ug/kg	0.758	1					
Bromoform	U	ND	0.280	0.840	ug/kg	0.758	1					
Bromomethane	U	ND	0.280	0.840	ug/kg	0.758	1					
Carbon disulfide	U	ND	1.40	4.20	ug/kg	0.758	1					
Carbon tetrachloride	U	ND	0.280	0.840	ug/kg	0.758	1					
Chlorobenzene	U	ND	0.280	0.840	ug/kg	0.758	1					

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Report Date: February 12, 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-43-6 Project: WNUC01519
Sample ID: 502680024 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	0.280	0.840	ug/kg	0.758	1				
Chloroform	U	ND	0.280	0.840	ug/kg	0.758	1				
Chloromethane	U	ND	0.280	0.840	ug/kg	0.758	1				
Cyclohexane	U	ND	0.280	0.840	ug/kg	0.758	1				
Dibromochloromethane	U	ND	0.280	0.840	ug/kg	0.758	1				
Dichlorodifluoromethane	U	ND	0.280	0.840	ug/kg	0.758	1				
Ethylbenzene	U	ND	0.280	0.840	ug/kg	0.758	1				
Isopropylbenzene	U	ND	0.280	0.840	ug/kg	0.758	1				
Methyl acetate	U	ND	1.40	4.20	ug/kg	0.758	1				
Methylcyclohexane	U	ND	0.280	0.840	ug/kg	0.758	1				
Methylene chloride	U	ND	1.40	4.20	ug/kg	0.758	1				
Styrene	U	ND	0.280	0.840	ug/kg	0.758	1				
Tetrachloroethylene	U	ND	0.280	0.840	ug/kg	0.758	1				
Toluene	U	ND	0.280	0.840	ug/kg	0.758	1				
Trichloroethylene	U	ND	0.280	0.840	ug/kg	0.758	1				
Trichlorofluoromethane	U	ND	0.280	0.840	ug/kg	0.758	1				
Trichlorotrifluoroethane	U	ND	1.40	4.20	ug/kg	0.758	1				
Vinyl chloride	U	ND	0.280	0.840	ug/kg	0.758	1				
cis-1,2-Dichloroethylene	U	ND	0.280	0.840	ug/kg	0.758	1				
cis-1,3-Dichloropropylene	U	ND	0.280	0.840	ug/kg	0.758	1				
m,p-Xylenes	U	ND	0.560	1.68	ug/kg	0.758	1				
o-Xylene	U	ND	0.280	0.840	ug/kg	0.758	1				
tert-Butyl methyl ether	U	ND	0.280	0.840	ug/kg	0.758	1				
trans-1,2-Dichloroethylene	U	ND	0.280	0.840	ug/kg	0.758	1				
trans-1,3-Dichloropropylene	U	ND	0.280	0.840	ug/kg	0.758	1				

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	02/03/20	0910	1964990
SW846 5035A	5035A/8260B Prep	JEB	02/03/20	1511	1965432
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

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

Client Sample ID: C-43-6 Project: WNUC01519
Sample ID: 502680024 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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"	38.5 ug/kg	50.0	92	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.9 ug/kg	50.0	107	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	40.7 ug/kg	50.0	97	(81%-120%)

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

Client Sample ID:	C-39-1	Project:	WNUC01519
Sample ID:	502680025	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 10:24		
Receive Date:	29-JAN-20		
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	J	0.721	0.377	1.11	mg/kg	9.73	1	LXA2	02/01/20	0327	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID:	C-39-2	Project:	WNUC01519
Sample ID:	502680026	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 10:28		
Receive Date:	29-JAN-20		
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	U	ND	0.369	1.08	mg/kg	9.69	1	LXA2	02/01/20	0456	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-39-3
Sample ID: 502680027
Matrix: Solid
Collect Date: 28-JAN-20 10:31
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.3%

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	J	0.851	0.373	1.10	mg/kg	9.85	1	LXA2	02/01/20	0526	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.444	1.33	ug/kg	1.20	1	PXY1	02/07/20	1342	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,1,2-Trichloroethane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,1-Dichloroethane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,1-Dichloroethylene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2,3-Trichlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2,4-Trichlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2-Dibromo-3-chloropropane	U	ND	0.667	1.33	ug/kg	1.20	1					
1,2-Dibromoethane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2-Dichlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2-Dichloroethane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,2-Dichloropropane	U	ND	0.444	1.33	ug/kg	1.20	1					
1,3-Dichlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,4-Dichlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
1,4-Dioxane	U	ND	22.2	66.7	ug/kg	1.20	1					
2-Butanone	U	ND	2.22	6.67	ug/kg	1.20	1					
2-Hexanone	U	ND	2.22	6.67	ug/kg	1.20	1					
4-Methyl-2-pentanone	U	ND	2.22	6.67	ug/kg	1.20	1					
Acetone		9.00	2.22	6.67	ug/kg	1.20	1					
Benzene	U	ND	0.444	1.33	ug/kg	1.20	1					
Bromochloromethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Bromodichloromethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Bromoform	U	ND	0.444	1.33	ug/kg	1.20	1					
Bromomethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Carbon disulfide	U	ND	2.22	6.67	ug/kg	1.20	1					
Carbon tetrachloride	U	ND	0.444	1.33	ug/kg	1.20	1					
Chlorobenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
Chloroethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Chloroform	U	ND	0.444	1.33	ug/kg	1.20	1					
Chloromethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Cyclohexane	U	ND	0.444	1.33	ug/kg	1.20	1					
Dibromochloromethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Dichlorodifluoromethane	U	ND	0.444	1.33	ug/kg	1.20	1					

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

Client Sample ID: C-39-3 Project: WNUC01519
Sample ID: 502680027 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"												
Ethylbenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
Isopropylbenzene	U	ND	0.444	1.33	ug/kg	1.20	1					
Methyl acetate	U	ND	2.22	6.67	ug/kg	1.20	1					
Methylcyclohexane	U	ND	0.444	1.33	ug/kg	1.20	1					
Methylene chloride	U	ND	2.22	6.67	ug/kg	1.20	1					
Styrene	U	ND	0.444	1.33	ug/kg	1.20	1					
Tetrachloroethylene	U	ND	0.444	1.33	ug/kg	1.20	1					
Toluene	U	ND	0.444	1.33	ug/kg	1.20	1					
Trichloroethylene	U	ND	0.444	1.33	ug/kg	1.20	1					
Trichlorofluoromethane	U	ND	0.444	1.33	ug/kg	1.20	1					
Trichlorotrifluoroethane	U	ND	2.22	6.67	ug/kg	1.20	1					
Vinyl chloride	U	ND	0.444	1.33	ug/kg	1.20	1					
cis-1,2-Dichloroethylene	U	ND	0.444	1.33	ug/kg	1.20	1					
cis-1,3-Dichloropropylene	U	ND	0.444	1.33	ug/kg	1.20	1					
m,p-Xylenes	U	ND	0.889	2.67	ug/kg	1.20	1					
o-Xylene	U	ND	0.444	1.33	ug/kg	1.20	1					
tert-Butyl methyl ether	U	ND	0.444	1.33	ug/kg	1.20	1					
trans-1,2-Dichloroethylene	U	ND	0.444	1.33	ug/kg	1.20	1					
trans-1,3-Dichloropropylene	U	ND	0.444	1.33	ug/kg	1.20	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1031	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	72.5 ug/kg	50.0	109	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	66.5 ug/kg	50.0	100	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	66.6 ug/kg	50.0	100	(81%-120%)

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

Client Sample ID:	C-39-3	Project:	WNUC01519
Sample ID:	502680027	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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

Client Sample ID: C-39-4
Sample ID: 502680028
Matrix: Solid
Collect Date: 28-JAN-20 10:37
Receive Date: 29-JAN-20
Collector: Client
Moisture: 15.3%

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	U	ND	0.397	1.17	mg/kg	9.90	1	LXA2	02/01/20	0556	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-39-5
Sample ID: 502680029
Matrix: Solid
Collect Date: 28-JAN-20 10:42
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.3%

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	U	ND	0.388	1.14	mg/kg	9.90	1	LXA2	02/01/20	0626	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-67-1
Sample ID: 502680030
Matrix: Solid
Collect Date: 28-JAN-20 11:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.5%

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	U	ND	0.378	1.11	mg/kg	9.95	1	LXA2	02/01/20	0656	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.371	1.12	ug/kg	0.998	1	PXY1	02/07/20	1411	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,1,2-Trichloroethane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,1-Dichloroethane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,1-Dichloroethylene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2,3-Trichlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2,4-Trichlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2-Dibromo-3-chloropropane	U	ND	0.558	1.12	ug/kg	0.998	1					
1,2-Dibromoethane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2-Dichlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2-Dichloroethane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,2-Dichloropropane	U	ND	0.371	1.12	ug/kg	0.998	1					
1,3-Dichlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,4-Dichlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
1,4-Dioxane	U	ND	18.6	55.8	ug/kg	0.998	1					
2-Butanone	U	ND	1.86	5.58	ug/kg	0.998	1					
2-Hexanone	U	ND	1.86	5.58	ug/kg	0.998	1					
4-Methyl-2-pentanone	U	ND	1.86	5.58	ug/kg	0.998	1					
Acetone	U	ND	1.86	5.58	ug/kg	0.998	1					
Benzene	U	ND	0.371	1.12	ug/kg	0.998	1					
Bromochloromethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Bromodichloromethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Bromoform	U	ND	0.371	1.12	ug/kg	0.998	1					
Bromomethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Carbon disulfide	U	ND	1.86	5.58	ug/kg	0.998	1					
Carbon tetrachloride	U	ND	0.371	1.12	ug/kg	0.998	1					
Chlorobenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
Chloroethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Chloroform	U	ND	0.371	1.12	ug/kg	0.998	1					
Chloromethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Cyclohexane	U	ND	0.371	1.12	ug/kg	0.998	1					
Dibromochloromethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Dichlorodifluoromethane	U	ND	0.371	1.12	ug/kg	0.998	1					

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Address : PO Drawer R

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

Client Sample ID: C-67-1 Project: WNUC01519
Sample ID: 502680030 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"												
Ethylbenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
Isopropylbenzene	U	ND	0.371	1.12	ug/kg	0.998	1					
Methyl acetate	U	ND	1.86	5.58	ug/kg	0.998	1					
Methylcyclohexane	U	ND	0.371	1.12	ug/kg	0.998	1					
Methylene chloride	U	ND	1.86	5.58	ug/kg	0.998	1					
Styrene	U	ND	0.371	1.12	ug/kg	0.998	1					
Tetrachloroethylene	U	ND	0.371	1.12	ug/kg	0.998	1					
Toluene	U	ND	0.371	1.12	ug/kg	0.998	1					
Trichloroethylene	U	ND	0.371	1.12	ug/kg	0.998	1					
Trichlorofluoromethane	U	ND	0.371	1.12	ug/kg	0.998	1					
Trichlorotrifluoroethane	U	ND	1.86	5.58	ug/kg	0.998	1					
Vinyl chloride	U	ND	0.371	1.12	ug/kg	0.998	1					
cis-1,2-Dichloroethylene	U	ND	0.371	1.12	ug/kg	0.998	1					
cis-1,3-Dichloropropylene	U	ND	0.371	1.12	ug/kg	0.998	1					
m,p-Xylenes	U	ND	0.744	2.23	ug/kg	0.998	1					
o-Xylene	U	ND	0.371	1.12	ug/kg	0.998	1					
tert-Butyl methyl ether	U	ND	0.371	1.12	ug/kg	0.998	1					
trans-1,2-Dichloroethylene	U	ND	0.371	1.12	ug/kg	0.998	1					
trans-1,3-Dichloropropylene	U	ND	0.371	1.12	ug/kg	0.998	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1103	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	57.8 ug/kg	50.0	104	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	58.5 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	58.1 ug/kg	50.0	104	(81%-120%)

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Report Date: February 12, 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-67-1	Project:	WNUC01519
Sample ID:	502680030	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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-67-2	Project:	WNUC01519
Sample ID:	502680031	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 11:08		
Receive Date:	29-JAN-20		
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		1.48	0.385	1.13	mg/kg	9.93	1	JLD1	02/11/20	1111	1967554	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235	J	13.2	2.18	15.3	ug/kg	95.6	2	SKJ	02/11/20	0858	1964991	2
Uranium-238		1050	14.4	43.6	ug/kg	95.6	2					
Uranium-234	U	ND	2.18	10.9	ug/kg	95.6	2	SKJ	02/11/20	1058	1964991	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	02/03/20	0910	1964990
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

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-67-3
Sample ID: 502680032
Matrix: Solid
Collect Date: 28-JAN-20 11:19
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.5%

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	U	ND	0.389	1.14	mg/kg	10.0	1	LXA2	02/01/20	0726	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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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Address :	PO Drawer R
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Contact:	Ms. Cynthia Logsdon
Project:	ENV-CONSENTA-4500778461

Client Sample ID:	C-59-4	Project:	WNUC01519
Sample ID:	502680033	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 11:26		
Receive Date:	29-JAN-20		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.385	1.13	mg/kg	10.0	1	LXA2	02/01/20	0755	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-59-5	Project:	WNUC01519
Sample ID:	502680034	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 11:31		
Receive Date:	29-JAN-20		
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		2.59	0.400	1.18	mg/kg	10.3	1	LXA2	02/01/20	0825	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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

Client Sample ID: C-59-6
Sample ID: 502680035
Matrix: Solid
Collect Date: 28-JAN-20 11:38
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.5%

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		1.76	0.386	1.13	mg/kg	9.93	1	LXA2	02/01/20	0855	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.426	1.28	ug/kg	1.12	1	PXY1	02/07/20	1440	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,1,2-Trichloroethane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,1-Dichloroethane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,1-Dichloroethylene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2,3-Trichlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2,4-Trichlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2-Dibromo-3-chloropropane	U	ND	0.639	1.28	ug/kg	1.12	1					
1,2-Dibromoethane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2-Dichlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2-Dichloroethane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,2-Dichloropropane	U	ND	0.426	1.28	ug/kg	1.12	1					
1,3-Dichlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,4-Dichlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
1,4-Dioxane	U	ND	21.3	63.9	ug/kg	1.12	1					
2-Butanone	U	ND	2.13	6.39	ug/kg	1.12	1					
2-Hexanone	U	ND	2.13	6.39	ug/kg	1.12	1					
4-Methyl-2-pentanone	U	ND	2.13	6.39	ug/kg	1.12	1					
Acetone		11.9	2.13	6.39	ug/kg	1.12	1					
Benzene	U	ND	0.426	1.28	ug/kg	1.12	1					
Bromochloromethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Bromodichloromethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Bromoform	U	ND	0.426	1.28	ug/kg	1.12	1					
Bromomethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Carbon disulfide	U	ND	2.13	6.39	ug/kg	1.12	1					
Carbon tetrachloride	U	ND	0.426	1.28	ug/kg	1.12	1					
Chlorobenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
Chloroethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Chloroform	U	ND	0.426	1.28	ug/kg	1.12	1					
Chloromethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Cyclohexane	U	ND	0.426	1.28	ug/kg	1.12	1					
Dibromochloromethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Dichlorodifluoromethane	U	ND	0.426	1.28	ug/kg	1.12	1					

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

Client Sample ID: C-59-6 Project: WNUC01519
Sample ID: 502680035 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"												
Ethylbenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
Isopropylbenzene	U	ND	0.426	1.28	ug/kg	1.12	1					
Methyl acetate	U	ND	2.13	6.39	ug/kg	1.12	1					
Methylcyclohexane	U	ND	0.426	1.28	ug/kg	1.12	1					
Methylene chloride	U	ND	2.13	6.39	ug/kg	1.12	1					
Styrene	U	ND	0.426	1.28	ug/kg	1.12	1					
Tetrachloroethylene	U	ND	0.426	1.28	ug/kg	1.12	1					
Toluene	U	ND	0.426	1.28	ug/kg	1.12	1					
Trichloroethylene	U	ND	0.426	1.28	ug/kg	1.12	1					
Trichlorofluoromethane	U	ND	0.426	1.28	ug/kg	1.12	1					
Trichlorotrifluoroethane	U	ND	2.13	6.39	ug/kg	1.12	1					
Vinyl chloride	U	ND	0.426	1.28	ug/kg	1.12	1					
cis-1,2-Dichloroethylene	U	ND	0.426	1.28	ug/kg	1.12	1					
cis-1,3-Dichloropropylene	U	ND	0.426	1.28	ug/kg	1.12	1					
m,p-Xylenes	U	ND	0.853	2.56	ug/kg	1.12	1					
o-Xylene	U	ND	0.426	1.28	ug/kg	1.12	1					
tert-Butyl methyl ether	U	ND	0.426	1.28	ug/kg	1.12	1					
trans-1,2-Dichloroethylene	U	ND	0.426	1.28	ug/kg	1.12	1					
trans-1,3-Dichloropropylene	U	ND	0.426	1.28	ug/kg	1.12	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1138	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	70.4 ug/kg	50.0	110	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	62.2 ug/kg	50.0	97	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	63.5 ug/kg	50.0	99	(81%-120%)

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

Client Sample ID:	C-59-6	Project:	WNUC01519
Sample ID:	502680035	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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

Client Sample ID:	C-51-7	Project:	WNUC01519
Sample ID:	502680036	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 11:59		
Receive Date:	29-JAN-20		
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	J	0.926	0.370	1.09	mg/kg	9.50	1	LXA2	02/01/20	0925	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-51-8
Sample ID: 502680037
Matrix: Solid
Collect Date: 28-JAN-20 12:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 16.1%

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		4.49	0.393	1.15	mg/kg	9.69	1	JLD1	02/11/20	1140	1967554	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.399	1.20	ug/kg	1.00	1	PXY1	02/07/20	1509	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,1,2-Trichloroethane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,1-Dichloroethane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,1-Dichloroethylene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2,3-Trichlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2,4-Trichlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2-Dibromo-3-chloropropane	U	ND	0.599	1.20	ug/kg	1.00	1					
1,2-Dibromoethane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2-Dichlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2-Dichloroethane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,2-Dichloropropane	U	ND	0.399	1.20	ug/kg	1.00	1					
1,3-Dichlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,4-Dichlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
1,4-Dioxane	U	ND	20.0	59.9	ug/kg	1.00	1					
2-Butanone	U	ND	2.00	5.99	ug/kg	1.00	1					
2-Hexanone	U	ND	2.00	5.99	ug/kg	1.00	1					
4-Methyl-2-pentanone	U	ND	2.00	5.99	ug/kg	1.00	1					
Acetone		7.43	2.00	5.99	ug/kg	1.00	1					
Benzene	U	ND	0.399	1.20	ug/kg	1.00	1					
Bromochloromethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Bromodichloromethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Bromoform	U	ND	0.399	1.20	ug/kg	1.00	1					
Bromomethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Carbon disulfide	U	ND	2.00	5.99	ug/kg	1.00	1					
Carbon tetrachloride	U	ND	0.399	1.20	ug/kg	1.00	1					
Chlorobenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
Chloroethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Chloroform	U	ND	0.399	1.20	ug/kg	1.00	1					
Chloromethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Cyclohexane	U	ND	0.399	1.20	ug/kg	1.00	1					
Dibromochloromethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Dichlorodifluoromethane	U	ND	0.399	1.20	ug/kg	1.00	1					

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Address : PO Drawer R

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

Client Sample ID: C-51-8 Project: WNUC01519
Sample ID: 502680037 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"												
Ethylbenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
Isopropylbenzene	U	ND	0.399	1.20	ug/kg	1.00	1					
Methyl acetate	U	ND	2.00	5.99	ug/kg	1.00	1					
Methylcyclohexane	U	ND	0.399	1.20	ug/kg	1.00	1					
Methylene chloride	U	ND	2.00	5.99	ug/kg	1.00	1					
Styrene	U	ND	0.399	1.20	ug/kg	1.00	1					
Tetrachloroethylene	U	ND	0.399	1.20	ug/kg	1.00	1					
Toluene	U	ND	0.399	1.20	ug/kg	1.00	1					
Trichloroethylene	U	ND	0.399	1.20	ug/kg	1.00	1					
Trichlorofluoromethane	U	ND	0.399	1.20	ug/kg	1.00	1					
Trichlorotrifluoroethane	U	ND	2.00	5.99	ug/kg	1.00	1					
Vinyl chloride	U	ND	0.399	1.20	ug/kg	1.00	1					
cis-1,2-Dichloroethylene	U	ND	0.399	1.20	ug/kg	1.00	1					
cis-1,3-Dichloropropylene	U	ND	0.399	1.20	ug/kg	1.00	1					
m,p-Xylenes	U	ND	0.799	2.39	ug/kg	1.00	1					
o-Xylene	U	ND	0.399	1.20	ug/kg	1.00	1					
tert-Butyl methyl ether	U	ND	0.399	1.20	ug/kg	1.00	1					
trans-1,2-Dichloroethylene	U	ND	0.399	1.20	ug/kg	1.00	1					
trans-1,3-Dichloropropylene	U	ND	0.399	1.20	ug/kg	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1203	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	63.8 ug/kg	50.0	107	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	61.2 ug/kg	50.0	102	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	61.0 ug/kg	50.0	102	(81%-120%)

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Report Date: February 12, 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-51-8	Project:	WNUC01519
Sample ID:	502680037	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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-51-9	Project:	WNUC01519
Sample ID:	502680038	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 12:08		
Receive Date:	29-JAN-20		
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		3.08	0.381	1.12	mg/kg	9.85	1	JLD1	02/11/20	1210	1967554	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-58-10	Project:	WNUC01519
Sample ID:	502680039	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 12:17		
Receive Date:	29-JAN-20		
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		1.27	0.384	1.13	mg/kg	9.88	1	LXA2	02/01/20	1054	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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-58-11	Project:	WNUC01519
Sample ID:	502680040	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 12:22		
Receive Date:	29-JAN-20		
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		1.29	0.373	1.10	mg/kg	9.83	1	LXA2	02/01/20	1124	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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-58-12
Sample ID: 502680041
Matrix: Solid
Collect Date: 28-JAN-20 12:28
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.68%

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	U	ND	0.375	1.10	mg/kg	9.95	1	LXA2	02/01/20	1154	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.301	0.905	ug/kg	0.817	1	PXY1	02/10/20	1310	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,1,2-Trichloroethane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,1-Dichloroethane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,1-Dichloroethylene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2,3-Trichlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2,4-Trichlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2-Dibromo-3-chloropropane	U	ND	0.452	0.905	ug/kg	0.817	1					
1,2-Dibromoethane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2-Dichlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2-Dichloroethane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,2-Dichloropropane	U	ND	0.301	0.905	ug/kg	0.817	1					
1,3-Dichlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,4-Dichlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
1,4-Dioxane	U	ND	15.1	45.2	ug/kg	0.817	1					
2-Butanone	U	ND	1.51	4.52	ug/kg	0.817	1					
2-Hexanone	U	ND	1.51	4.52	ug/kg	0.817	1					
4-Methyl-2-pentanone	U	ND	1.51	4.52	ug/kg	0.817	1					
Acetone	J	3.38	1.51	4.52	ug/kg	0.817	1					
Benzene	U	ND	0.301	0.905	ug/kg	0.817	1					
Bromochloromethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Bromodichloromethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Bromoform	U	ND	0.301	0.905	ug/kg	0.817	1					
Bromomethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Carbon disulfide	U	ND	1.51	4.52	ug/kg	0.817	1					
Carbon tetrachloride	U	ND	0.301	0.905	ug/kg	0.817	1					
Chlorobenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
Chloroethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Chloroform	U	ND	0.301	0.905	ug/kg	0.817	1					
Chloromethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Cyclohexane	U	ND	0.301	0.905	ug/kg	0.817	1					
Dibromochloromethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Dichlorodifluoromethane	U	ND	0.301	0.905	ug/kg	0.817	1					

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Report Date: February 12, 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-58-12 Project: WNUC01519
Sample ID: 502680041 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"												
Ethylbenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
Isopropylbenzene	U	ND	0.301	0.905	ug/kg	0.817	1					
Methyl acetate	U	ND	1.51	4.52	ug/kg	0.817	1					
Methylcyclohexane	U	ND	0.301	0.905	ug/kg	0.817	1					
Methylene chloride	U	ND	1.51	4.52	ug/kg	0.817	1					
Styrene	U	ND	0.301	0.905	ug/kg	0.817	1					
Tetrachloroethylene	U	ND	0.301	0.905	ug/kg	0.817	1					
Toluene	U	ND	0.301	0.905	ug/kg	0.817	1					
Trichloroethylene	U	ND	0.301	0.905	ug/kg	0.817	1					
Trichlorofluoromethane	U	ND	0.301	0.905	ug/kg	0.817	1					
Trichlorotrifluoroethane	U	ND	1.51	4.52	ug/kg	0.817	1					
Vinyl chloride	U	ND	0.301	0.905	ug/kg	0.817	1					
cis-1,2-Dichloroethylene	U	ND	0.301	0.905	ug/kg	0.817	1					
cis-1,3-Dichloropropylene	U	ND	0.301	0.905	ug/kg	0.817	1					
m,p-Xylenes	U	ND	0.603	1.81	ug/kg	0.817	1					
o-Xylene	U	ND	0.301	0.905	ug/kg	0.817	1					
tert-Butyl methyl ether	U	ND	0.301	0.905	ug/kg	0.817	1					
trans-1,2-Dichloroethylene	U	ND	0.301	0.905	ug/kg	0.817	1					
trans-1,3-Dichloropropylene	U	ND	0.301	0.905	ug/kg	0.817	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1228	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 8260B	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	45.3 ug/kg	50.0	100	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.1 ug/kg	50.0	102	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.3 ug/kg	50.0	102	(81%-120%)

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Report Date: February 12, 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-58-12	Project:	WNUC01519
Sample ID:	502680041	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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: February 12, 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-52-13
Sample ID: 502680042
Matrix: Solid
Collect Date: 28-JAN-20 12:35
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

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	J	0.820	0.395	1.16	mg/kg	10.3	1	LXA2	02/01/20	1224	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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-52-14
Sample ID: 502680043
Matrix: Solid
Collect Date: 28-JAN-20 12:41
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

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	J	0.596	0.385	1.13	mg/kg	10.1	1	LXA2	02/01/20	1254	1965070	1
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.304	0.914	ug/kg	0.810	1	PXY1	02/07/20	1607	1967050	2
1,1,2,2-Tetrachloroethane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,1,2-Trichloroethane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,1-Dichloroethane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,1-Dichloroethylene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2,3-Trichlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2,4-Trichlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2-Dibromo-3-chloropropane	U	ND	0.457	0.914	ug/kg	0.810	1					
1,2-Dibromoethane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2-Dichlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2-Dichloroethane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,2-Dichloropropane	U	ND	0.304	0.914	ug/kg	0.810	1					
1,3-Dichlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,4-Dichlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
1,4-Dioxane	U	ND	15.2	45.7	ug/kg	0.810	1					
2-Butanone	U	ND	1.52	4.57	ug/kg	0.810	1					
2-Hexanone	U	ND	1.52	4.57	ug/kg	0.810	1					
4-Methyl-2-pentanone	U	ND	1.52	4.57	ug/kg	0.810	1					
Acetone	U	ND	1.52	4.57	ug/kg	0.810	1					
Benzene	U	ND	0.304	0.914	ug/kg	0.810	1					
Bromochloromethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Bromodichloromethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Bromoform	U	ND	0.304	0.914	ug/kg	0.810	1					
Bromomethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Carbon disulfide	U	ND	1.52	4.57	ug/kg	0.810	1					
Carbon tetrachloride	U	ND	0.304	0.914	ug/kg	0.810	1					
Chlorobenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
Chloroethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Chloroform	U	ND	0.304	0.914	ug/kg	0.810	1					
Chloromethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Cyclohexane	U	ND	0.304	0.914	ug/kg	0.810	1					
Dibromochloromethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Dichlorodifluoromethane	U	ND	0.304	0.914	ug/kg	0.810	1					

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Report Date: February 12, 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-52-14 Project: WNUC01519
Sample ID: 502680043 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"												
Ethylbenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
Isopropylbenzene	U	ND	0.304	0.914	ug/kg	0.810	1					
Methyl acetate	U	ND	1.52	4.57	ug/kg	0.810	1					
Methylcyclohexane	U	ND	0.304	0.914	ug/kg	0.810	1					
Methylene chloride	U	ND	1.52	4.57	ug/kg	0.810	1					
Styrene	U	ND	0.304	0.914	ug/kg	0.810	1					
Tetrachloroethylene	U	ND	0.304	0.914	ug/kg	0.810	1					
Toluene	U	ND	0.304	0.914	ug/kg	0.810	1					
Trichloroethylene	U	ND	0.304	0.914	ug/kg	0.810	1					
Trichlorofluoromethane	U	ND	0.304	0.914	ug/kg	0.810	1					
Trichlorotrifluoroethane	U	ND	1.52	4.57	ug/kg	0.810	1					
Vinyl chloride	U	ND	0.304	0.914	ug/kg	0.810	1					
cis-1,2-Dichloroethylene	U	ND	0.304	0.914	ug/kg	0.810	1					
cis-1,3-Dichloropropylene	U	ND	0.304	0.914	ug/kg	0.810	1					
m,p-Xylenes	U	ND	0.609	1.83	ug/kg	0.810	1					
o-Xylene	U	ND	0.304	0.914	ug/kg	0.810	1					
tert-Butyl methyl ether	U	ND	0.304	0.914	ug/kg	0.810	1					
trans-1,2-Dichloroethylene	U	ND	0.304	0.914	ug/kg	0.810	1					
trans-1,3-Dichloropropylene	U	ND	0.304	0.914	ug/kg	0.810	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1241	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	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	102	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.7 ug/kg	50.0	102	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	46.1 ug/kg	50.0	101	(81%-120%)

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Report Date: February 12, 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-52-14	Project:	WNUC01519
Sample ID:	502680043	Client ID:	WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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-52-15	Project:	WNUC01519
Sample ID:	502680044	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	28-JAN-20 12:45		
Receive Date:	29-JAN-20		
Collector:	Client		
Moisture:	12.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.77	0.388	1.14	mg/kg	9.98	1	LXA2	02/01/20	1323	1965070	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	01/31/20	2221	1965069

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	

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: February 12, 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-51-16
Sample ID: 502680045
Matrix: Solid
Collect Date: 28-JAN-20 12:52
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.5%

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		1.16	0.381	1.12	mg/kg	10.0	1	JLD1	02/11/20	1240	1967554	1
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235	J	6.77	2.20	15.4	ug/kg	98.4	2	SKJ	02/11/20	0859	1964991	2
Uranium-238		822	14.5	44.0	ug/kg	98.4	2					
Uranium-234	U	ND	2.20	11.0	ug/kg	98.4	2	SKJ	02/11/20	1100	1964991	3
Volatile Organics												
SW846 8260B Volatiles, Solid "Dry Weight Corrected"												
1,1,1-Trichloroethane	U	ND	0.296	0.888	ug/kg	0.795	1	PXY1	02/07/20	1636	1967050	4
1,1,2,2-Tetrachloroethane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,1,2-Trichloroethane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,1-Dichloroethane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,1-Dichloroethylene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2,3-Trichlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2,4-Trichlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2-Dibromo-3-chloropropane	U	ND	0.444	0.888	ug/kg	0.795	1					
1,2-Dibromoethane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2-Dichlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2-Dichloroethane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,2-Dichloropropane	U	ND	0.296	0.888	ug/kg	0.795	1					
1,3-Dichlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,4-Dichlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					
1,4-Dioxane	U	ND	14.8	44.4	ug/kg	0.795	1					
2-Butanone	U	ND	1.48	4.44	ug/kg	0.795	1					
2-Hexanone	U	ND	1.48	4.44	ug/kg	0.795	1					
4-Methyl-2-pentanone	U	ND	1.48	4.44	ug/kg	0.795	1					
Acetone	U	ND	1.48	4.44	ug/kg	0.795	1					
Benzene	U	ND	0.296	0.888	ug/kg	0.795	1					
Bromochloromethane	U	ND	0.296	0.888	ug/kg	0.795	1					
Bromodichloromethane	U	ND	0.296	0.888	ug/kg	0.795	1					
Bromoform	U	ND	0.296	0.888	ug/kg	0.795	1					
Bromomethane	U	ND	0.296	0.888	ug/kg	0.795	1					
Carbon disulfide	U	ND	1.48	4.44	ug/kg	0.795	1					
Carbon tetrachloride	U	ND	0.296	0.888	ug/kg	0.795	1					
Chlorobenzene	U	ND	0.296	0.888	ug/kg	0.795	1					

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Certificate of Analysis

Report Date: February 12, 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-51-16 Project: WNUC01519
Sample ID: 502680045 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	0.296	0.888	ug/kg	0.795	1				
Chloroform	U	ND	0.296	0.888	ug/kg	0.795	1				
Chloromethane	U	ND	0.296	0.888	ug/kg	0.795	1				
Cyclohexane	U	ND	0.296	0.888	ug/kg	0.795	1				
Dibromochloromethane	U	ND	0.296	0.888	ug/kg	0.795	1				
Dichlorodifluoromethane	U	ND	0.296	0.888	ug/kg	0.795	1				
Ethylbenzene	U	ND	0.296	0.888	ug/kg	0.795	1				
Isopropylbenzene	U	ND	0.296	0.888	ug/kg	0.795	1				
Methyl acetate	U	ND	1.48	4.44	ug/kg	0.795	1				
Methylcyclohexane	U	ND	0.296	0.888	ug/kg	0.795	1				
Methylene chloride	U	ND	1.48	4.44	ug/kg	0.795	1				
Styrene	U	ND	0.296	0.888	ug/kg	0.795	1				
Tetrachloroethylene	U	ND	0.296	0.888	ug/kg	0.795	1				
Toluene	U	ND	0.296	0.888	ug/kg	0.795	1				
Trichloroethylene	U	ND	0.296	0.888	ug/kg	0.795	1				
Trichlorofluoromethane	U	ND	0.296	0.888	ug/kg	0.795	1				
Trichlorotrifluoroethane	U	ND	1.48	4.44	ug/kg	0.795	1				
Vinyl chloride	U	ND	0.296	0.888	ug/kg	0.795	1				
cis-1,2-Dichloroethylene	U	ND	0.296	0.888	ug/kg	0.795	1				
cis-1,3-Dichloropropylene	U	ND	0.296	0.888	ug/kg	0.795	1				
m,p-Xylenes	U	ND	0.592	1.78	ug/kg	0.795	1				
o-Xylene	U	ND	0.296	0.888	ug/kg	0.795	1				
tert-Butyl methyl ether	U	ND	0.296	0.888	ug/kg	0.795	1				
trans-1,2-Dichloroethylene	U	ND	0.296	0.888	ug/kg	0.795	1				
trans-1,3-Dichloropropylene	U	ND	0.296	0.888	ug/kg	0.795	1				

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	02/03/20	0910	1964990
SW846 5035A	5035A/8260B Prep	PXY1	01/28/20	1252	1967049
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	02/07/20	2244	1967553

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

Client Sample ID: C-51-16 Project: WNUC01519
Sample ID: 502680045 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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"	45.7 ug/kg	50.0	103	(81%-124%)
Bromofluorobenzene	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.5 ug/kg	50.0	100	(70%-130%)
Toluene-d8	SW846 8260B Volatiles, Solid "Dry Weight Corrected"	44.3 ug/kg	50.0	100	(81%-120%)

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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Certificate of Analysis

Report Date: February 12, 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: S-3-1
Sample ID: 502680001
Matrix: Solid
Collect Date: 23-JAN-20 12:42
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.75%

Project: WNUC01519
Client ID: WNUC009

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		7.14	+/-0.587	0.0901	0.500	pCi/g			HAKB	02/06/20	1727	1964848	1
Uranium-235/236		0.387	+/-0.155	0.0465	0.500	pCi/g							
Uranium-238		3.24	+/-0.396	0.0765	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.31	+/-2.10	3.76	5.00	pCi/g			JJ3	02/10/20	1615	1964841	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	02/04/20	1613	1964679

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"			94.9	(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
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: February 12, 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: S-3-2
Sample ID: 502680002
Matrix: Solid
Collect Date: 23-JAN-20 12:47
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.91%

Project: WNUC01519
Client ID: WNUC009

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		13.0	+/-0.831	0.116	0.500	pCi/g			HAKB	02/06/20	1727	1964848	1
Uranium-235/236		0.520	+/-0.190	0.0944	0.500	pCi/g							
Uranium-238		7.08	+/-0.614	0.0764	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.510	+/-1.93	3.40	5.00	pCi/g			JJ3	02/10/20	1632	1964841	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	02/04/20	1613	1964679

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"			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
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: S-3-3
Sample ID: 502680003
Matrix: Solid
Collect Date: 23-JAN-20 12:54
Receive Date: 29-JAN-20
Collector: Client
Moisture: 8.68%

Project: WNUC01519
Client ID: WNUC009

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		3.38	+/-0.484	0.200	0.500	pCi/g			HAKB	02/06/20	1727	1964848	1
Uranium-235/236	U	0.113	+/-0.113	0.131	0.500	pCi/g							
Uranium-238		1.40	+/-0.309	0.106	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.33	+/-1.98	3.54	5.00	pCi/g			JJ3	02/10/20	1648	1964841	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	02/04/20	1613	1964679

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"			93.4	(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
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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Certificate of Analysis

Report Date: February 12, 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-16-1
Sample ID: 502680004
Matrix: Solid
Collect Date: 23-JAN-20 13:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

Project: WNUC01519
Client ID: WNUC009

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		1.70	+/-0.325	0.194	0.500	pCi/g			HAKB	02/06/20	1727	1964848	1
Uranium-235/236		0.105	+/-0.0955	0.0876	0.500	pCi/g							
Uranium-238		0.718	+/-0.210	0.128	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0268	+/-2.02	3.53	5.00	pCi/g			JJ3	02/10/20	1705	1964841	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	02/04/20	1613	1964679

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"			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
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-16-2
Sample ID: 502680005
Matrix: Solid
Collect Date: 23-JAN-20 13:08
Receive Date: 29-JAN-20
Collector: Client
Moisture: 17.9%

Project: WNUC01519
Client ID: WNUC009

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		6.70	+/-0.649	0.144	0.500	pCi/g			HAKB	02/06/20	1737	1964848	1
Uranium-235/236		0.371	+/-0.176	0.111	0.500	pCi/g							
Uranium-238		2.24	+/-0.376	0.107	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.267	+/-2.31	4.00	5.00	pCi/g			JJ3	02/10/20	1721	1964841	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	02/04/20	1613	1964679

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"			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
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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Certificate of Analysis

Report Date: February 12, 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-16-3
Sample ID: 502680006
Matrix: Solid
Collect Date: 23-JAN-20 13:12
Receive Date: 29-JAN-20
Collector: Client
Moisture: 7.74%

Project: WNUC01519
Client ID: WNUC009

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		1.46	+/-0.264	0.100	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.134	+/-0.0929	0.0448	0.500	pCi/g							
Uranium-238		1.20	+/-0.238	0.0669	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.391	+/-2.24	3.93	5.00	pCi/g			JJ3	02/10/20	1738	1964841	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	02/04/20	1613	1964679

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"			90.8	(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
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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Certificate of Analysis

Report Date: February 12, 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-16-4
Sample ID: 502680007
Matrix: Solid
Collect Date: 23-JAN-20 13:20
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.32%

Project: WNUC01519
Client ID: WNUC009

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		3.00	+/-0.437	0.124	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.121	+/-0.105	0.0604	0.500	pCi/g							
Uranium-238		1.84	+/-0.343	0.114	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.263	+/-2.10	3.68	5.00	pCi/g			JJ3	02/10/20	1755	1964841	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	02/04/20	1613	1964679

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"			81.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			107	(15%-125%)

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

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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Certificate of Analysis

Report Date: February 12, 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-16-5
Sample ID: 502680008
Matrix: Solid
Collect Date: 23-JAN-20 13:24
Receive Date: 29-JAN-20
Collector: Client
Moisture: 14.6%

Project: WNUC01519
Client ID: WNUC009

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		19.2	+/-1.03	0.137	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.638	+/-0.213	0.0855	0.500	pCi/g							
Uranium-238		6.74	+/-0.613	0.112	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.22	+/-1.95	3.49	5.00	pCi/g			JJ3	02/10/20	1811	1964841	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	02/04/20	1613	1964679

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"			92.7	(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
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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Certificate of Analysis

Report Date: February 12, 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-33-1
Sample ID: 502680009
Matrix: Solid
Collect Date: 23-JAN-20 13:40
Receive Date: 29-JAN-20
Collector: Client
Moisture: 18.2%

Project: WNUC01519
Client ID: WNUC009

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		4.15	+/-0.470	0.120	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.212	+/-0.125	0.0936	0.500	pCi/g							
Uranium-238		1.66	+/-0.299	0.0959	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	1.08	+/-2.23	3.82	5.00	pCi/g			JJ3	02/10/20	1828	1964841	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	02/04/20	1613	1964679

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"			91.3	(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
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: February 12, 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-33-2
Sample ID: 502680010
Matrix: Solid
Collect Date: 23-JAN-20 13:45
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.25%

Project: WNUC01519
Client ID: WNUC009

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		0.629	+/-0.169	0.0930	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.00714	+/-0.0397	0.0761	0.500	pCi/g							
Uranium-238		0.698	+/-0.174	0.0533	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.593	+/-2.05	3.52	5.00	pCi/g			JJ3	02/10/20	1844	1964841	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	02/04/20	1613	1964679

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"			95.9	(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
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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Certificate of Analysis

Report Date: February 12, 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-33-3
Sample ID: 502680011
Matrix: Solid
Collect Date: 23-JAN-20 13:49
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.87%

Project: WNUC01519
Client ID: WNUC009

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		1.06	+/-0.265	0.144	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.0554	+/-0.0798	0.0963	0.500	pCi/g							
Uranium-238		0.918	+/-0.243	0.0900	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.483	+/-2.14	3.77	5.00	pCi/g			JJ3	02/10/20	1901	1964841	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	02/04/20	1613	1964679

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"			83.3	(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
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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Certificate of Analysis

Report Date: February 12, 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-33-4
Sample ID: 502680012
Matrix: Solid
Collect Date: 23-JAN-20 13:55
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.1%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.297	0.118	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.135	+/-0.111	0.0956	0.500	pCi/g							
Uranium-238		1.25	+/-0.281	0.0985	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.147	+/-2.13	3.71	5.00	pCi/g			JJ3	02/10/20	1918	1964841	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	02/04/20	1613	1964679

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"			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
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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Certificate of Analysis

Report Date: February 12, 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-33-5
Sample ID: 502680013
Matrix: Solid
Collect Date: 23-JAN-20 13:59
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.1%

Project: WNUC01519
Client ID: WNUC009

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		1.53	+/-0.284	0.116	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.0652	+/-0.0719	0.0489	0.500	pCi/g							
Uranium-238		0.983	+/-0.226	0.0731	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.637	+/-2.21	3.89	5.00	pCi/g			JJ3	02/10/20	1934	1964841	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	02/04/20	1613	1964679

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"			88.1	(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
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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Certificate of Analysis

Report Date: February 12, 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: S-50-1
Sample ID: 502680014
Matrix: Solid
Collect Date: 23-JAN-20 14:08
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.69%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.246	0.104	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.0469	+/-0.0617	0.0469	0.500	pCi/g							
Uranium-238		0.929	+/-0.215	0.0700	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.413	+/-2.08	3.59	5.00	pCi/g			JJ3	02/10/20	1951	1964841	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	02/04/20	1613	1964679

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"			88.1	(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
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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Certificate of Analysis

Report Date: February 12, 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: S-50-2
Sample ID: 502680015
Matrix: Solid
Collect Date: 23-JAN-20 14:12
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.7%

Project: WNUC01519
Client ID: WNUC009

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		3.24	+/-0.401	0.0961	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.119	+/-0.0938	0.0875	0.500	pCi/g							
Uranium-238		1.27	+/-0.252	0.0842	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.24	+/-2.18	3.89	5.00	pCi/g			JJ3	02/10/20	2008	1964841	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	02/04/20	1613	1964679

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	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.1	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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: S-50-3
Sample ID: 502680016
Matrix: Solid
Collect Date: 23-JAN-20 14:18
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.4%

Project: WNUC01519
Client ID: WNUC009

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		1.48	+/-0.284	0.112	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.0766	+/-0.0825	0.0939	0.500	pCi/g							
Uranium-238		0.978	+/-0.234	0.123	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.09	+/-1.49	2.67	5.00	pCi/g			JJ3	02/10/20	2047	1964847	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	02/04/20	1613	1964679

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"			84.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.1	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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: S-50-4
Sample ID: 502680017
Matrix: Solid
Collect Date: 23-JAN-20 14:23
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.6%

Project: WNUC01519
Client ID: WNUC009

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		3.83	+/-0.459	0.123	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236		0.253	+/-0.137	0.0966	0.500	pCi/g							
Uranium-238		1.32	+/-0.270	0.0781	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.984	+/-1.37	2.45	5.00	pCi/g			JJ3	02/10/20	2108	1964847	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	02/04/20	1613	1964679

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"			87.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.3	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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: S-50-5
Sample ID: 502680018
Matrix: Solid
Collect Date: 23-JAN-20 14:27
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11%

Project: WNUC01519
Client ID: WNUC009

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		1.66	+/-0.269	0.0821	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.0555	+/-0.0676	0.0906	0.500	pCi/g							
Uranium-238		1.19	+/-0.228	0.0679	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.488	+/-1.58	2.77	5.00	pCi/g			JJ3	02/10/20	2129	1964847	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	02/04/20	1613	1964679

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"			94.1	(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
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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Certificate of Analysis

Report Date: February 12, 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-43-1
Sample ID: 502680019
Matrix: Solid
Collect Date: 23-JAN-20 14:38
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13%

Project: WNUC01519
Client ID: WNUC009

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		1.75	+/-0.279	0.0949	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.0461	+/-0.0630	0.0858	0.500	pCi/g							
Uranium-238		0.849	+/-0.194	0.0545	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.29	+/-1.55	2.79	5.00	pCi/g			JJ3	02/10/20	2150	1964847	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	02/04/20	1613	1964679

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"			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
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: February 12, 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-43-2
Sample ID: 502680020
Matrix: Solid
Collect Date: 23-JAN-20 14:42
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.3%

Project: WNUC01519
Client ID: WNUC009

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		1.74	+/-0.290	0.101	0.500	pCi/g			HAKB	02/07/20	0834	1964848	1
Uranium-235/236	U	0.0568	+/-0.0669	0.0724	0.500	pCi/g							
Uranium-238		0.983	+/-0.217	0.0676	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.762	+/-1.51	2.69	5.00	pCi/g			JJ3	02/10/20	2212	1964847	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	02/04/20	1613	1964679

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"			90.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.9	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-43-3
Sample ID: 502680021
Matrix: Solid
Collect Date: 23-JAN-20 14:46
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.7%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.233	0.0847	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0436	+/-0.0646	0.0944	0.500	pCi/g							
Uranium-238		0.664	+/-0.175	0.0708	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.48	+/-1.53	2.76	5.00	pCi/g			JJ3	02/10/20	2233	1964847	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	02/04/20	1618	1964681

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"			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
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: February 12, 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-43-4
Sample ID: 502680022
Matrix: Solid
Collect Date: 23-JAN-20 14:51
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.2%

Project: WNUC01519
Client ID: WNUC009

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		1.76	+/-0.322	0.120	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0604	+/-0.0825	0.112	0.500	pCi/g							
Uranium-238		0.905	+/-0.230	0.0714	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.738	+/-1.45	2.57	5.00	pCi/g			JJ3	02/10/20	2254	1964847	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	02/04/20	1618	1964681

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"			73.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97	(15%-125%)

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

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: February 12, 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-43-5
Sample ID: 502680023
Matrix: Solid
Collect Date: 23-JAN-20 14:55
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.8%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.271	0.121	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0882	+/-0.0898	0.0888	0.500	pCi/g							
Uranium-238		0.802	+/-0.218	0.0830	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.727	+/-1.49	2.65	5.00	pCi/g			JJ3	02/10/20	2315	1964847	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	02/04/20	1618	1964681

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"			74.6	(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
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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Certificate of Analysis

Report Date: February 12, 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-43-6
Sample ID: 502680024
Matrix: Solid
Collect Date: 23-JAN-20 14:59
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.79%

Project: WNUC01519
Client ID: WNUC009

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		1.32	+/-0.288	0.135	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0974	+/-0.102	0.127	0.500	pCi/g							
Uranium-238		0.743	+/-0.215	0.0866	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.14	+/-1.50	2.68	5.00	pCi/g			JJ3	02/10/20	2336	1964847	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	02/04/20	1618	1964681

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"			67.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.1	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-39-1
Sample ID: 502680025
Matrix: Solid
Collect Date: 28-JAN-20 10:24
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.2%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.346	0.114	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0675	+/-0.0854	0.106	0.500	pCi/g							
Uranium-238		1.30	+/-0.282	0.102	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.24	+/-1.41	2.54	5.00	pCi/g			JJ3	02/10/20	2357	1964847	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	02/04/20	1618	1964681

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"			78.6	(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
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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Certificate of Analysis

Report Date: February 12, 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-39-2
Sample ID: 502680026
Matrix: Solid
Collect Date: 28-JAN-20 10:28
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.7%

Project: WNUC01519
Client ID: WNUC009

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		1.76	+/-0.331	0.150	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236		0.221	+/-0.136	0.106	0.500	pCi/g							
Uranium-238		1.10	+/-0.260	0.102	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.0216	+/-1.55	2.70	5.00	pCi/g			JJ3	02/11/20	0019	1964847	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	02/04/20	1618	1964681

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"			72.5	(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
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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Certificate of Analysis

Report Date: February 12, 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-39-3
Sample ID: 502680027
Matrix: Solid
Collect Date: 28-JAN-20 10:31
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.3%

Project: WNUC01519
Client ID: WNUC009

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		1.03	+/-0.228	0.113	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236		0.0921	+/-0.0799	0.0460	0.500	pCi/g							
Uranium-238		0.692	+/-0.184	0.0595	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.24	+/-1.58	2.83	5.00	pCi/g			JJ3	02/11/20	0040	1964847	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	02/04/20	1618	1964681

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"			90.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.1	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-39-4
Sample ID: 502680028
Matrix: Solid
Collect Date: 28-JAN-20 10:37
Receive Date: 29-JAN-20
Collector: Client
Moisture: 15.3%

Project: WNUC01519
Client ID: WNUC009

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		0.873	+/-0.251	0.122	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236		0.177	+/-0.131	0.0664	0.500	pCi/g							
Uranium-238		0.721	+/-0.228	0.109	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0304	+/-1.62	2.81	5.00	pCi/g			JJ3	02/11/20	0101	1964847	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	02/04/20	1618	1964681

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"			66	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.3	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-39-5
Sample ID: 502680029
Matrix: Solid
Collect Date: 28-JAN-20 10:42
Receive Date: 29-JAN-20
Collector: Client
Moisture: 13.3%

Project: WNUC01519
Client ID: WNUC009

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		1.35	+/-0.322	0.136	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236		0.160	+/-0.132	0.114	0.500	pCi/g							
Uranium-238		0.835	+/-0.253	0.106	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.619	+/-1.57	2.69	5.00	pCi/g			JJ3	02/11/20	0122	1964847	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	02/04/20	1618	1964681

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"			64.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.6	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-67-1
Sample ID: 502680030
Matrix: Solid
Collect Date: 28-JAN-20 11:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.5%

Project: WNUC01519
Client ID: WNUC009

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		0.763	+/-0.197	0.0806	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0120	+/-0.0449	0.0754	0.500	pCi/g							
Uranium-238		0.707	+/-0.189	0.0705	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.907	+/-1.53	2.72	5.00	pCi/g			JJ3	02/11/20	0144	1964847	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	02/04/20	1618	1964681

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"			86.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.6	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: February 12, 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-67-2
Sample ID: 502680031
Matrix: Solid
Collect Date: 28-JAN-20 11:08
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.4%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.262	0.109	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236		0.0777	+/-0.0856	0.0583	0.500	pCi/g							
Uranium-238		0.680	+/-0.207	0.0960	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.615	+/-1.94	3.41	5.00	pCi/g			JJ3	02/10/20	1436	1964866	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	02/04/20	1618	1964681

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"			78.9	(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
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: February 12, 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-67-3
Sample ID: 502680032
Matrix: Solid
Collect Date: 28-JAN-20 11:19
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.5%

Project: WNUC01519
Client ID: WNUC009

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		0.861	+/-0.223	0.119	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0618	+/-0.0782	0.0972	0.500	pCi/g							
Uranium-238		0.746	+/-0.205	0.0786	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.348	+/-1.78	3.12	5.00	pCi/g			JJ3	02/10/20	1458	1964866	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	02/04/20	1618	1964681

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"			82.7	(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
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: February 12, 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-59-4
Sample ID: 502680033
Matrix: Solid
Collect Date: 28-JAN-20 11:26
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.5%

Project: WNUC01519
Client ID: WNUC009

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		0.739	+/-0.239	0.196	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.00589	+/-0.0615	0.128	0.500	pCi/g							
Uranium-238		0.736	+/-0.224	0.104	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.221	+/-1.70	2.93	5.00	pCi/g			JJ3	02/10/20	1520	1964866	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	02/04/20	1618	1964681

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"			95.9	(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
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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Certificate of Analysis

Report Date: February 12, 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-59-5
Sample ID: 502680034
Matrix: Solid
Collect Date: 28-JAN-20 11:31
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.1%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.345	0.252	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.114	+/-0.116	0.115	0.500	pCi/g							
Uranium-238		0.959	+/-0.277	0.168	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.192	+/-1.69	2.95	5.00	pCi/g			JJ3	02/10/20	1542	1964866	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	02/04/20	1618	1964681

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"			77.4	(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
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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Certificate of Analysis

Report Date: February 12, 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-59-6
Sample ID: 502680035
Matrix: Solid
Collect Date: 28-JAN-20 11:38
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.5%

Project: WNUC01519
Client ID: WNUC009

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		0.952	+/-0.261	0.140	0.500	pCi/g			MXS2	02/06/20	1323	1964849	1
Uranium-235/236	U	0.0113	+/-0.0629	0.121	0.500	pCi/g							
Uranium-238		0.582	+/-0.205	0.116	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.873	+/-1.81	3.20	5.00	pCi/g			JJ3	02/10/20	1604	1964866	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	02/04/20	1618	1964681

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"			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
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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Certificate of Analysis

Report Date: February 12, 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-51-7
Sample ID: 502680036
Matrix: Solid
Collect Date: 28-JAN-20 11:59
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.6%

Project: WNUC01519
Client ID: WNUC009

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		1.53	+/-0.272	0.100	0.500	pCi/g			MXS2	02/06/20	1723	1964849	1
Uranium-235/236		0.0602	+/-0.0664	0.0452	0.500	pCi/g							
Uranium-238		0.871	+/-0.204	0.0675	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.13	+/-1.51	2.70	5.00	pCi/g			JJ3	02/10/20	1626	1964866	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	02/04/20	1618	1964681

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"			87.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			106	(15%-125%)

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

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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Certificate of Analysis

Report Date: February 12, 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-51-8
Sample ID: 502680037
Matrix: Solid
Collect Date: 28-JAN-20 12:03
Receive Date: 29-JAN-20
Collector: Client
Moisture: 16.1%

Project: WNUC01519
Client ID: WNUC009

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		1.65	+/-0.316	0.118	0.500	pCi/g			MXS2	02/06/20	1723	1964849	1
Uranium-235/236	U	0.0380	+/-0.0651	0.0570	0.500	pCi/g							
Uranium-238		0.781	+/-0.220	0.108	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.733	+/-1.81	3.19	5.00	pCi/g			JJ3	02/10/20	1648	1964866	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	02/04/20	1618	1964681

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"			86.5	(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
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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Certificate of Analysis

Report Date: February 12, 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-51-9
Sample ID: 502680038
Matrix: Solid
Collect Date: 28-JAN-20 12:08
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12%

Project: WNUC01519
Client ID: WNUC009

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		1.04	+/-0.263	0.151	0.500	pCi/g			MXS2	02/06/20	1723	1964849	1
Uranium-235/236	U	0.0151	+/-0.0567	0.0954	0.500	pCi/g							
Uranium-238		0.633	+/-0.206	0.125	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.277	+/-1.79	3.13	5.00	pCi/g			JJ3	02/10/20	1710	1964866	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	02/04/20	1618	1964681

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"			100	(15%-125%)

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

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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Certificate of Analysis

Report Date: February 12, 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-58-10
Sample ID: 502680039
Matrix: Solid
Collect Date: 28-JAN-20 12:17
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.5%

Project: WNUC01519
Client ID: WNUC009

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		0.714	+/-0.207	0.126	0.500	pCi/g			MXS2	02/06/20	1723	1964849	1
Uranium-235/236	U	0.0450	+/-0.0716	0.0990	0.500	pCi/g							
Uranium-238		0.764	+/-0.211	0.101	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.547	+/-1.80	3.08	5.00	pCi/g			JJ3	02/10/20	1732	1964866	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	02/04/20	1618	1964681

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"			87.3	(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
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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Certificate of Analysis

Report Date: February 12, 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-58-11
Sample ID: 502680040
Matrix: Solid
Collect Date: 28-JAN-20 12:22
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.4%

Project: WNUC01519
Client ID: WNUC009

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		1.09	+/-0.311	0.222	0.500	pCi/g			MXS2	02/08/20	0650	1964849	1
Uranium-235/236	U	0.00708	+/-0.0741	0.155	0.500	pCi/g							
Uranium-238		0.913	+/-0.280	0.178	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.309	+/-1.71	2.94	5.00	pCi/g			JJ3	02/10/20	1754	1964866	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	02/04/20	1618	1964681

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"			71.9	(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
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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Certificate of Analysis

Report Date: February 12, 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-58-12
Sample ID: 502680041
Matrix: Solid
Collect Date: 28-JAN-20 12:28
Receive Date: 29-JAN-20
Collector: Client
Moisture: 9.68%

Project: WNUC01519
Client ID: WNUC009

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		1.28	+/-0.240	0.0949	0.500	pCi/g			BXA4	02/06/20	1727	1964850	1
Uranium-235/236	U	0.0388	+/-0.0558	0.0673	0.500	pCi/g							
Uranium-238		0.983	+/-0.209	0.0629	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.631	+/-1.77	3.11	5.00	pCi/g			JJ3	02/10/20	1816	1964866	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	02/04/20	1624	1964683

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"			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
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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Certificate of Analysis

Report Date: February 12, 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-52-13
Sample ID: 502680042
Matrix: Solid
Collect Date: 28-JAN-20 12:35
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

Project: WNUC01519
Client ID: WNUC009

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	+/-0.252	0.107	0.500	pCi/g			BXA4	02/06/20	1727	1964850	1
Uranium-235/236	U	0.0906	+/-0.0846	0.0988	0.500	pCi/g							
Uranium-238		1.04	+/-0.222	0.0672	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0198	+/-1.79	3.10	5.00	pCi/g			JJ3	02/10/20	1838	1964866	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	02/04/20	1624	1964683

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"			87.7	(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
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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Certificate of Analysis

Report Date: February 12, 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-52-14
Sample ID: 502680043
Matrix: Solid
Collect Date: 28-JAN-20 12:41
Receive Date: 29-JAN-20
Collector: Client
Moisture: 11.3%

Project: WNUC01519
Client ID: WNUC009

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		0.898	+/-0.213	0.0957	0.500	pCi/g			BXA4	02/06/20	1727	1964850	1
Uranium-235/236	U	0.0237	+/-0.0544	0.0863	0.500	pCi/g							
Uranium-238		0.732	+/-0.192	0.0831	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0994	+/-1.79	3.10	5.00	pCi/g			JJ3	02/10/20	1901	1964866	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	02/04/20	1624	1964683

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"			95.1	(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
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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Certificate of Analysis

Report Date: February 12, 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-52-15
Sample ID: 502680044
Matrix: Solid
Collect Date: 28-JAN-20 12:45
Receive Date: 29-JAN-20
Collector: Client
Moisture: 12.7%

Project: WNUC01519
Client ID: WNUC009

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		4.22	+/-0.500	0.147	0.500	pCi/g			BXA4	02/06/20	1727	1964850	1
Uranium-235/236		0.159	+/-0.117	0.104	0.500	pCi/g							
Uranium-238		1.42	+/-0.291	0.0997	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.242	+/-1.74	3.04	5.00	pCi/g			JJ3	02/10/20	1922	1964866	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	02/04/20	1624	1964683

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"			74.7	(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
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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Certificate of Analysis

Report Date: February 12, 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-51-16
Sample ID: 502680045
Matrix: Solid
Collect Date: 28-JAN-20 12:52
Receive Date: 29-JAN-20
Collector: Client
Moisture: 10.5%

Project: WNUC01519
Client ID: WNUC009

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		0.853	+/-0.203	0.109	0.500	pCi/g			BXA4	02/06/20	1727	1964850	1
Uranium-235/236		0.0440	+/-0.0579	0.0440	0.500	pCi/g							
Uranium-238		0.661	+/-0.176	0.0568	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.583	+/-1.76	3.09	5.00	pCi/g			JJ3	02/10/20	1944	1964866	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	02/04/20	1624	1964683

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"			94.2	(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
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

QC Summary

Report Date: February 12, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 1965068										
QC1204489197 502680001 DUP										
Fluoride		1.19		1.62	mg/kg	30.5 ^		(+/-1.12)	CH5	02/01/20 09:32
QC1204489198 502680002 DUP										
Fluoride		4.16		3.23	mg/kg	25.1 ^		(+/-1.10)		02/01/20 11:01
QC1204489196 LCS										
Fluoride	24.7			24.4	mg/kg		98.9	(90%-110%)		02/01/20 08:32
QC1204489195 MB										
Fluoride			U	ND	mg/kg					02/01/20 08:02
QC1204489199 502680001 MS										
Fluoride	28.0	1.19		8.26	mg/kg		25.3*	(75%-125%)		02/01/20 10:01
QC1204489200 502680002 MS										
Fluoride	27.3	4.16		13.4	mg/kg		33.8*	(75%-125%)		02/01/20 11:31
Batch 1965070										
QC1204489203 502680021 DUP										
Fluoride	U	ND	J	0.605	mg/kg	200			LXA2	02/01/20 00:28
QC1204489204 502680022 DUP										
Fluoride		1.79		1.60	mg/kg	10.8 ^		(+/-1.18)		02/01/20 01:58
QC1204489202 LCS										
Fluoride	25.1			25.8	mg/kg		103	(90%-110%)		01/31/20 23:28
QC1204489201 MB										
Fluoride			U	ND	mg/kg					01/31/20 22:59

QC Summary

Workorder: **502680**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography											
Batch 1965070											
QC1204489205 502680021 MS											
Fluoride	29.1	U	ND		30.1	mg/kg		103	(75%-125%)	LXA2	02/01/20 00:58
QC1204489206 502680022 MS											
Fluoride	28.8		1.79		15.1	mg/kg		46.2*	(75%-125%)		02/01/20 02:27
Batch 1967554											
QC1204494593 502680005 DUP											
Fluoride		J	0.925	J	0.935	mg/kg	1.06 ^		(+/-1.21)	JLD1	02/08/20 12:39
QC1204494592 LCS											
Fluoride	24.9				24.9	mg/kg		100	(90%-110%)		02/08/20 11:39
QC1204494591 MB											
Fluoride				U	ND	mg/kg					02/08/20 11:09
QC1204494595 502680005 MS											
Fluoride	30.8	J	0.925		7.28	mg/kg		20.6*	(75%-125%)		02/08/20 13:09
Metals Analysis - ICPMS											
Batch 1964991											
QC1204489017 LCS											
Uranium-235	33.0				33.5	ug/kg		101	(80%-120%)	SKJ	02/12/20 07:42
Uranium-238	4550				4440	ug/kg		97.6	(80%-120%)		
QC1204489021 LCS											
Uranium-234	51.4				56.8	ug/kg		110	(80%-120%)		02/11/20 10:45
QC1204489016 MB											
Uranium-234				U	ND	ug/kg					02/11/20 10:44
Uranium-235				U	ND	ug/kg					02/12/20 07:58

QC Summary

Workorder: **502680**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1964991											
Uranium-238				U	ND	ug/kg				SKJ	02/12/20 07:58
QC1204489018 502680005 MS											
Uranium-235	40.5		136		101	ug/kg		0*	(75%-125%)		02/12/20 07:45
Uranium-238	5590		5870		8630	ug/kg		49.6*	(75%-125%)		
QC1204489022 502680005 MS											
Uranium-234	64.0	U	ND		74.6	ug/kg		115	(75%-125%)		02/11/20 10:48
QC1204489019 502680005 MSD											
Uranium-235	42.8		136		119	ug/kg	16.7	0*	(0%-20%)		02/12/20 07:46
Uranium-238	5900		5870		9860	ug/kg	13.2	67.6*	(0%-20%)		
QC1204489023 502680005 MSD											
Uranium-234	65.3	U	ND		72.7	ug/kg	2.57	109	(0%-20%)		02/11/20 10:50
QC1204496218 502680005 PS											
Uranium-235	0.360		0.573		0.910	ug/L		93.6	(75%-125%)		02/12/20 07:48
Uranium-238	49.6		24.7		71.3	ug/L		94	(75%-125%)		
QC1204489020 502680005 SDILT											
Uranium-234		U	ND	U	ND	ug/L	N/A		(0%-20%)		02/11/20 10:51
Uranium-235			0.573		0.113	ug/L	1.26		(0%-20%)		02/12/20 07:49
Uranium-238			24.7		4.88	ug/L	1.14		(0%-20%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
QC1204490089 LCS											
1,1,1-Trichloroethane	50.0			55.9	ug/kg		112	(70%-130%)	JEB	02/03/20	14:04
1,1,2,2-Tetrachloroethane	50.0			53.6	ug/kg		107	(70%-130%)			
1,1,2-Trichloroethane	50.0			49.1	ug/kg		98	(70%-130%)			
1,1-Dichloroethane	50.0			45.5	ug/kg		91	(70%-130%)			
1,1-Dichloroethylene	50.0			51.4	ug/kg		103	(70%-130%)			
1,2,3-Trichlorobenzene	50.0			50.2	ug/kg		100	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			48.6	ug/kg		97	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0			49.7	ug/kg		99	(70%-130%)			
1,2-Dibromoethane	50.0			53.4	ug/kg		107	(70%-130%)			
1,2-Dichlorobenzene	50.0			48.8	ug/kg		98	(70%-130%)			
1,2-Dichloroethane	50.0			42.8	ug/kg		86	(70%-130%)			
1,2-Dichloropropane	50.0			43.8	ug/kg		88	(70%-130%)			
1,3-Dichlorobenzene	50.0			48.0	ug/kg		96	(70%-130%)			
1,4-Dichlorobenzene	50.0			46.9	ug/kg		94	(70%-130%)			
2-Butanone	250			226	ug/kg		90	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
2-Hexanone	250			204	ug/kg		82	(70%-130%)	JEB	02/03/20	14:04
4-Methyl-2-pentanone	250			226	ug/kg		90	(70%-130%)			
Acetone	250			238	ug/kg		95	(70%-130%)			
Benzene	50.0			45.3	ug/kg		91	(70%-130%)			
Bromochloromethane	50.0			53.2	ug/kg		106	(70%-130%)			
Bromodichloromethane	50.0			51.5	ug/kg		103	(70%-130%)			
Bromoform	50.0			49.9	ug/kg		100	(70%-130%)			
Bromomethane	50.0			48.2	ug/kg		96	(70%-130%)			
Carbon disulfide	250			241	ug/kg		96	(70%-130%)			
Carbon tetrachloride	50.0			58.5	ug/kg		117	(70%-130%)			
Chlorobenzene	50.0			46.8	ug/kg		94	(70%-130%)			
Chloroethane	50.0			42.5	ug/kg		85	(70%-130%)			
Chloroform	50.0			52.6	ug/kg		105	(70%-130%)			
Chloromethane	50.0			42.9	ug/kg		86	(70%-130%)			
Cyclohexane	50.0			41.2	ug/kg		82	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
Dibromochloromethane	50.0			51.7	ug/kg		103	(70%-130%)	JEB	02/03/20	14:04
Dichlorodifluoromethane	50.0			58.1	ug/kg		116	(70%-130%)			
Ethylbenzene	50.0			47.7	ug/kg		95	(70%-130%)			
Isopropylbenzene	50.0			52.0	ug/kg		104	(70%-130%)			
Methyl acetate	250			209	ug/kg		84	(70%-130%)			
Methylcyclohexane	50.0			46.4	ug/kg		93	(70%-130%)			
Methylene chloride	50.0			45.3	ug/kg		91	(70%-130%)			
Styrene	50.0			51.2	ug/kg		102	(70%-130%)			
Tetrachloroethylene	50.0			48.7	ug/kg		97	(70%-130%)			
Toluene	50.0			46.8	ug/kg		94	(70%-130%)			
Trichloroethylene	50.0			48.8	ug/kg		98	(70%-130%)			
Trichlorofluoromethane	50.0			51.5	ug/kg		103	(70%-130%)			
Vinyl chloride	50.0			44.6	ug/kg		89	(70%-130%)			
cis-1,2-Dichloroethylene	50.0			48.9	ug/kg		98	(70%-130%)			
cis-1,3-Dichloropropylene	50.0			50.8	ug/kg		102	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1965433										
m,p-Xylenes	100			95.3	ug/kg		95	(70%-130%)	JEB	02/03/20 14:04
o-Xylene	50.0			48.0	ug/kg		96	(70%-130%)		
tert-Butyl methyl ether	50.0			40.8	ug/kg		82	(70%-130%)		
trans-1,2-Dichloroethylene	50.0			47.0	ug/kg		94	(70%-130%)		
trans-1,3-Dichloropropylene	50.0			48.0	ug/kg		96	(70%-130%)		
**1,2-Dichloroethane-d4	50.0			48.1	ug/L		96	(81%-124%)		
**Bromofluorobenzene	50.0			50.1	ug/L		100	(70%-130%)		
**Toluene-d8	50.0			47.3	ug/L		95	(81%-120%)		
QC1204490090 LCSD										
1,1,1-Trichloroethane	50.0			51.8	ug/kg	8	104	(0%-20%)		02/03/20 14:28
1,1,2,2-Tetrachloroethane	50.0			49.0	ug/kg	9	98	(0%-20%)		
1,1,2-Trichloroethane	50.0			46.2	ug/kg	6	92	(0%-20%)		
1,1-Dichloroethane	50.0			42.4	ug/kg	7	85	(0%-20%)		
1,1-Dichloroethylene	50.0			47.1	ug/kg	9	94	(0%-20%)		
1,2,3-Trichlorobenzene	50.0			47.2	ug/kg	6	94	(0%-20%)		
1,2,4-Trichlorobenzene	50.0			45.9	ug/kg	6	92	(0%-20%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
1,2-Dibromo-3-chloropropane	50.0			44.5	ug/kg	11	89	(0%-20%)	JEB	02/03/20	14:28
1,2-Dibromoethane	50.0			49.9	ug/kg	7	100	(0%-20%)			
1,2-Dichlorobenzene	50.0			46.1	ug/kg	6	92	(0%-20%)			
1,2-Dichloroethane	50.0			40.5	ug/kg	6	81	(0%-20%)			
1,2-Dichloropropane	50.0			41.4	ug/kg	6	83	(0%-20%)			
1,3-Dichlorobenzene	50.0			44.9	ug/kg	7	90	(0%-20%)			
1,4-Dichlorobenzene	50.0			44.2	ug/kg	6	88	(0%-20%)			
2-Butanone	250			203	ug/kg	11	81	(0%-20%)			
2-Hexanone	250			187	ug/kg	9	75	(0%-20%)			
4-Methyl-2-pentanone	250			207	ug/kg	9	83	(0%-20%)			
Acetone	250			212	ug/kg	12	85	(0%-20%)			
Benzene	50.0			42.6	ug/kg	6	85	(0%-20%)			
Bromochloromethane	50.0			50.2	ug/kg	6	100	(0%-20%)			
Bromodichloromethane	50.0			48.5	ug/kg	6	97	(0%-20%)			
Bromoform	50.0			45.8	ug/kg	9	92	(0%-20%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
Bromomethane	50.0			50.0	ug/kg	4	100	(0%-20%)	JEB	02/03/20	14:28
Carbon disulfide	250			225	ug/kg	7	90	(0%-20%)			
Carbon tetrachloride	50.0			53.8	ug/kg	8	108	(0%-20%)			
Chlorobenzene	50.0			44.4	ug/kg	5	89	(0%-20%)			
Chloroethane	50.0			40.0	ug/kg	6	80	(0%-20%)			
Chloroform	50.0			49.5	ug/kg	6	99	(0%-20%)			
Chloromethane	50.0			41.9	ug/kg	2	84	(0%-20%)			
Cyclohexane	50.0			37.8	ug/kg	8	76	(0%-20%)			
Dibromochloromethane	50.0			48.7	ug/kg	6	97	(0%-20%)			
Dichlorodifluoromethane	50.0			55.1	ug/kg	5	110	(0%-20%)			
Ethylbenzene	50.0			45.1	ug/kg	6	90	(0%-20%)			
Isopropylbenzene	50.0			48.2	ug/kg	8	96	(0%-20%)			
Methyl acetate	250			189	ug/kg	10	75	(0%-20%)			
Methylcyclohexane	50.0			42.5	ug/kg	9	85	(0%-20%)			
Methylene chloride	50.0			42.6	ug/kg	6	85	(0%-20%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
Styrene	50.0			48.9	ug/kg	5	98	(0%-20%)	JEB	02/03/20	14:28
Tetrachloroethylene	50.0			45.8	ug/kg	6	92	(0%-20%)			
Toluene	50.0			44.3	ug/kg	5	89	(0%-20%)			
Trichloroethylene	50.0			45.3	ug/kg	7	91	(0%-20%)			
Trichlorofluoromethane	50.0			49.0	ug/kg	5	98	(0%-20%)			
Vinyl chloride	50.0			43.3	ug/kg	3	87	(0%-20%)			
cis-1,2-Dichloroethylene	50.0			45.8	ug/kg	7	92	(0%-20%)			
cis-1,3-Dichloropropylene	50.0			47.6	ug/kg	6	95	(0%-20%)			
m,p-Xylenes	100			90.4	ug/kg	5	90	(0%-20%)			
o-Xylene	50.0			45.8	ug/kg	5	92	(0%-20%)			
tert-Butyl methyl ether	50.0			38.3	ug/kg	6	77	(0%-20%)			
trans-1,2-Dichloroethylene	50.0			43.3	ug/kg	8	87	(0%-20%)			
trans-1,3-Dichloropropylene	50.0			45.3	ug/kg	6	91	(0%-20%)			
**1,2-Dichloroethane-d4	50.0			48.0	ug/L		96	(81%-124%)			
**Bromofluorobenzene	50.0			49.5	ug/L		99	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
**Toluene-d8	50.0			47.9	ug/L		96	(81%-120%)	JEB	02/03/20	14:28
QC1204490088 MB											
1,1,1-Trichloroethane			U	ND	ug/kg					02/03/20	16:38
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						
1,2-Dichloropropane			U	ND	ug/kg						
1,3-Dichlorobenzene			U	ND	ug/kg						
1,4-Dichlorobenzene			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
1,4-Dioxane			U	ND	ug/kg				JEB	02/03/20	16:38
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						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1965433											
Chloromethane			U	ND	ug/kg				JEB	02/03/20	16:38
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						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1965433										
Vinyl chloride			U	ND	ug/kg				JEB	02/03/20 16:38
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			44.1	ug/L		88	(81%-124%)		
**Bromofluorobenzene	50.0			48.4	ug/L		97	(70%-130%)		
**Toluene-d8	50.0			47.5	ug/L		95	(81%-120%)		
Batch 1967050										
QC1204493486 LCS										
1,1,1-Trichloroethane	50.0			57.9	ug/kg		116	(70%-130%)	PXY1	02/07/20 06:57
1,1,2,2-Tetrachloroethane	50.0			53.6	ug/kg		107	(70%-130%)		
1,1,2-Trichloroethane	50.0			53.1	ug/kg		106	(70%-130%)		
1,1-Dichloroethane	50.0			56.7	ug/kg		113	(70%-130%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
1,1-Dichloroethylene	50.0			58.2	ug/kg		116	(70%-130%)	PXY1	02/07/20	06:57
1,2,3-Trichlorobenzene	50.0			51.9	ug/kg		104	(70%-130%)			
1,2,4-Trichlorobenzene	50.0			51.3	ug/kg		103	(70%-130%)			
1,2-Dibromo-3-chloropropane	50.0			48.8	ug/kg		98	(70%-130%)			
1,2-Dibromoethane	50.0			54.1	ug/kg		108	(70%-130%)			
1,2-Dichlorobenzene	50.0			51.6	ug/kg		103	(70%-130%)			
1,2-Dichloroethane	50.0			47.7	ug/kg		95	(70%-130%)			
1,2-Dichloropropane	50.0			53.9	ug/kg		108	(70%-130%)			
1,3-Dichlorobenzene	50.0			50.3	ug/kg		101	(70%-130%)			
1,4-Dichlorobenzene	50.0			50.9	ug/kg		102	(70%-130%)			
2-Butanone	250			271	ug/kg		108	(70%-130%)			
2-Hexanone	250			255	ug/kg		102	(70%-130%)			
4-Methyl-2-pentanone	250			259	ug/kg		103	(70%-130%)			
Acetone	250			284	ug/kg		114	(70%-130%)			
Benzene	50.0			53.5	ug/kg		107	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Bromochloromethane	50.0			54.7	ug/kg		109	(70%-130%)	PXY1	02/07/20	06:57
Bromodichloromethane	50.0			60.4	ug/kg		121	(70%-130%)			
Bromoform	50.0			50.6	ug/kg		101	(70%-130%)			
Bromomethane	50.0			53.2	ug/kg		106	(70%-130%)			
Carbon disulfide	250			291	ug/kg		116	(70%-130%)			
Carbon tetrachloride	50.0			58.9	ug/kg		118	(70%-130%)			
Chlorobenzene	50.0			51.7	ug/kg		103	(70%-130%)			
Chloroethane	50.0			51.5	ug/kg		103	(70%-130%)			
Chloroform	50.0			55.8	ug/kg		112	(70%-130%)			
Chloromethane	50.0			54.7	ug/kg		109	(70%-130%)			
Cyclohexane	50.0			58.9	ug/kg		118	(70%-130%)			
Dibromochloromethane	50.0			53.5	ug/kg		107	(70%-130%)			
Dichlorodifluoromethane	50.0			70.1	ug/kg		140*	(70%-130%)			
Ethylbenzene	50.0			54.7	ug/kg		109	(70%-130%)			
Isopropylbenzene	50.0			55.9	ug/kg		112	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Methyl acetate	250			280	ug/kg		112	(70%-130%)	PXY1	02/07/20	06:57
Methylcyclohexane	50.0			56.7	ug/kg		113	(70%-130%)			
Methylene chloride	50.0			49.3	ug/kg		99	(70%-130%)			
Styrene	50.0			55.0	ug/kg		110	(70%-130%)			
Tetrachloroethylene	50.0			55.0	ug/kg		110	(70%-130%)			
Toluene	50.0			53.1	ug/kg		106	(70%-130%)			
Trichloroethylene	50.0			54.1	ug/kg		108	(70%-130%)			
Trichlorofluoromethane	50.0			50.9	ug/kg		102	(70%-130%)			
Vinyl chloride	50.0			53.4	ug/kg		107	(70%-130%)			
cis-1,2-Dichloroethylene	50.0			54.5	ug/kg		109	(70%-130%)			
cis-1,3-Dichloropropylene	50.0			56.2	ug/kg		112	(70%-130%)			
m,p-Xylenes	100			108	ug/kg		108	(70%-130%)			
o-Xylene	50.0			54.0	ug/kg		108	(70%-130%)			
tert-Butyl methyl ether	50.0			52.2	ug/kg		104	(70%-130%)			
trans-1,2-Dichloroethylene	50.0			57.4	ug/kg		115	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
trans-1,3-Dichloropropylene	50.0			52.0	ug/kg		104	(70%-130%)	PXY1	02/07/20 06:57
**1,2-Dichloroethane-d4	50.0			50.3	ug/L		101	(81%-124%)		
**Bromofluorobenzene	50.0			51.5	ug/L		103	(70%-130%)		
**Toluene-d8	50.0			52.7	ug/L		105	(81%-120%)		
QC1204495065 LCS										
1,1,1-Trichloroethane	50.0			53.1	ug/kg		106	(70%-130%)		02/10/20 10:44
1,1,2,2-Tetrachloroethane	50.0			51.0	ug/kg		102	(70%-130%)		
1,1,2-Trichloroethane	50.0			50.5	ug/kg		101	(70%-130%)		
1,1-Dichloroethane	50.0			52.7	ug/kg		105	(70%-130%)		
1,1-Dichloroethylene	50.0			54.1	ug/kg		108	(70%-130%)		
1,2,3-Trichlorobenzene	50.0			48.5	ug/kg		97	(70%-130%)		
1,2,4-Trichlorobenzene	50.0			47.8	ug/kg		96	(70%-130%)		
1,2-Dibromo-3-chloropropane	50.0			46.2	ug/kg		92	(70%-130%)		
1,2-Dibromoethane	50.0			51.8	ug/kg		104	(70%-130%)		
1,2-Dichlorobenzene	50.0			48.9	ug/kg		98	(70%-130%)		
1,2-Dichloroethane	50.0			44.2	ug/kg		88	(70%-130%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
1,2-Dichloropropane	50.0			50.8	ug/kg		102	(70%-130%)	PXY1	02/10/20	10:44
1,3-Dichlorobenzene	50.0			46.7	ug/kg		93	(70%-130%)			
1,4-Dichlorobenzene	50.0			47.7	ug/kg		95	(70%-130%)			
2-Butanone	250			260	ug/kg		104	(70%-130%)			
2-Hexanone	250			251	ug/kg		100	(70%-130%)			
4-Methyl-2-pentanone	250			247	ug/kg		99	(70%-130%)			
Acetone	250			274	ug/kg		110	(70%-130%)			
Benzene	50.0			49.6	ug/kg		99	(70%-130%)			
Bromochloromethane	50.0			51.6	ug/kg		103	(70%-130%)			
Bromodichloromethane	50.0			56.6	ug/kg		113	(70%-130%)			
Bromoform	50.0			48.1	ug/kg		96	(70%-130%)			
Bromomethane	50.0			47.9	ug/kg		96	(70%-130%)			
Carbon disulfide	250			270	ug/kg		108	(70%-130%)			
Carbon tetrachloride	50.0			54.5	ug/kg		109	(70%-130%)			
Chlorobenzene	50.0			48.1	ug/kg		96	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Chloroethane	50.0			46.6	ug/kg		93	(70%-130%)	PXY1	02/10/20	10:44
Chloroform	50.0			52.6	ug/kg		105	(70%-130%)			
Chloromethane	50.0			48.8	ug/kg		98	(70%-130%)			
Cyclohexane	50.0			54.4	ug/kg		109	(70%-130%)			
Dibromochloromethane	50.0			50.5	ug/kg		101	(70%-130%)			
Dichlorodifluoromethane	50.0			56.8	ug/kg		114	(70%-130%)			
Ethylbenzene	50.0			51.3	ug/kg		103	(70%-130%)			
Isopropylbenzene	50.0			52.3	ug/kg		105	(70%-130%)			
Methyl acetate	250			264	ug/kg		106	(70%-130%)			
Methylcyclohexane	50.0			51.8	ug/kg		104	(70%-130%)			
Methylene chloride	50.0			46.4	ug/kg		93	(70%-130%)			
Styrene	50.0			51.8	ug/kg		104	(70%-130%)			
Tetrachloroethylene	50.0			50.8	ug/kg		102	(70%-130%)			
Toluene	50.0			50.6	ug/kg		101	(70%-130%)			
Trichloroethylene	50.0			49.8	ug/kg		100	(70%-130%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
Trichlorofluoromethane	50.0			46.1	ug/kg		92	(70%-130%)	PXY1	02/10/20 10:44
Vinyl chloride	50.0			47.3	ug/kg		95	(70%-130%)		
cis-1,2-Dichloroethylene	50.0			50.9	ug/kg		102	(70%-130%)		
cis-1,3-Dichloropropylene	50.0			53.1	ug/kg		106	(70%-130%)		
m,p-Xylenes	100			101	ug/kg		101	(70%-130%)		
o-Xylene	50.0			50.8	ug/kg		102	(70%-130%)		
tert-Butyl methyl ether	50.0			50.0	ug/kg		100	(70%-130%)		
trans-1,2-Dichloroethylene	50.0			52.9	ug/kg		106	(70%-130%)		
trans-1,3-Dichloropropylene	50.0			49.4	ug/kg		99	(70%-130%)		
**1,2-Dichloroethane-d4	50.0			49.8	ug/L		100	(81%-124%)		
**Bromofluorobenzene	50.0			50.2	ug/L		100	(70%-130%)		
**Toluene-d8	50.0			51.3	ug/L		103	(81%-120%)		
QC1204493487 LCSD										
1,1,1-Trichloroethane	50.0			53.7	ug/kg	8	107	(0%-20%)		02/07/20 07:26
1,1,2,2-Tetrachloroethane	50.0			51.5	ug/kg	4	103	(0%-20%)		
1,1,2-Trichloroethane	50.0			50.7	ug/kg	5	101	(0%-20%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
1,1-Dichloroethane	50.0			52.0	ug/kg	9	104	(0%-20%)	PXY1	02/07/20 07:26
1,1-Dichloroethylene	50.0			53.2	ug/kg	9	106	(0%-20%)		
1,2,3-Trichlorobenzene	50.0			50.0	ug/kg	4	100	(0%-20%)		
1,2,4-Trichlorobenzene	50.0			49.3	ug/kg	4	99	(0%-20%)		
1,2-Dibromo-3-chloropropane	50.0			45.5	ug/kg	7	91	(0%-20%)		
1,2-Dibromoethane	50.0			50.8	ug/kg	6	102	(0%-20%)		
1,2-Dichlorobenzene	50.0			50.0	ug/kg	3	100	(0%-20%)		
1,2-Dichloroethane	50.0			43.5	ug/kg	9	87	(0%-20%)		
1,2-Dichloropropane	50.0			50.4	ug/kg	7	101	(0%-20%)		
1,3-Dichlorobenzene	50.0			48.2	ug/kg	4	96	(0%-20%)		
1,4-Dichlorobenzene	50.0			48.7	ug/kg	4	97	(0%-20%)		
2-Butanone	250			250	ug/kg	8	100	(0%-20%)		
2-Hexanone	250			237	ug/kg	7	95	(0%-20%)		
4-Methyl-2-pentanone	250			237	ug/kg	9	95	(0%-20%)		
Acetone	250			262	ug/kg	8	105	(0%-20%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Benzene	50.0			49.8	ug/kg	7	100	(0%-20%)	PXY1	02/07/20	07:26
Bromochloromethane	50.0			51.5	ug/kg	6	103	(0%-20%)			
Bromodichloromethane	50.0			55.9	ug/kg	8	112	(0%-20%)			
Bromoform	50.0			48.4	ug/kg	5	97	(0%-20%)			
Bromomethane	50.0			49.2	ug/kg	8	98	(0%-20%)			
Carbon disulfide	250			268	ug/kg	8	107	(0%-20%)			
Carbon tetrachloride	50.0			53.8	ug/kg	9	108	(0%-20%)			
Chlorobenzene	50.0			49.0	ug/kg	6	98	(0%-20%)			
Chloroethane	50.0			48.7	ug/kg	6	97	(0%-20%)			
Chloroform	50.0			51.8	ug/kg	8	104	(0%-20%)			
Chloromethane	50.0			51.8	ug/kg	5	104	(0%-20%)			
Cyclohexane	50.0			55.1	ug/kg	7	110	(0%-20%)			
Dibromochloromethane	50.0			50.1	ug/kg	7	100	(0%-20%)			
Dichlorodifluoromethane	50.0			65.5	ug/kg	7	131*	(0%-20%)			
Ethylbenzene	50.0			51.5	ug/kg	6	103	(0%-20%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Isopropylbenzene	50.0			53.9	ug/kg	4	108	(0%-20%)	PXY1	02/07/20	07:26
Methyl acetate	250			257	ug/kg	9	103	(0%-20%)			
Methylcyclohexane	50.0			52.7	ug/kg	7	105	(0%-20%)			
Methylene chloride	50.0			46.3	ug/kg	6	93	(0%-20%)			
Styrene	50.0			51.7	ug/kg	6	103	(0%-20%)			
Tetrachloroethylene	50.0			51.3	ug/kg	7	103	(0%-20%)			
Toluene	50.0			50.9	ug/kg	4	102	(0%-20%)			
Trichloroethylene	50.0			49.7	ug/kg	8	99	(0%-20%)			
Trichlorofluoromethane	50.0			46.7	ug/kg	9	93	(0%-20%)			
Vinyl chloride	50.0			49.7	ug/kg	7	99	(0%-20%)			
cis-1,2-Dichloroethylene	50.0			51.4	ug/kg	6	103	(0%-20%)			
cis-1,3-Dichloropropylene	50.0			53.0	ug/kg	6	106	(0%-20%)			
m,p-Xylenes	100			102	ug/kg	6	102	(0%-20%)			
o-Xylene	50.0			51.0	ug/kg	6	102	(0%-20%)			
tert-Butyl methyl ether	50.0			48.9	ug/kg	7	98	(0%-20%)			

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
trans-1,2-Dichloroethylene	50.0			52.4	ug/kg	9	105	(0%-20%)	PXY1	02/07/20 07:26
trans-1,3-Dichloropropylene	50.0			48.8	ug/kg	6	98	(0%-20%)		
**1,2-Dichloroethane-d4	50.0			48.7	ug/L		97	(81%-124%)		
**Bromofluorobenzene	50.0			51.0	ug/L		102	(70%-130%)		
**Toluene-d8	50.0			52.2	ug/L		104	(81%-120%)		
QC1204493485 MB										
1,1,1-Trichloroethane			U	ND	ug/kg					02/07/20 09:22
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					

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
1,2-Dichloroethane			U	ND	ug/kg				PXY1	02/07/20	09:22
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						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
Carbon tetrachloride			U	ND	ug/kg				PXY1	02/07/20 09:22
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					
Methylcyclohexane			U	ND	ug/kg					
Methylene chloride			U	ND	ug/kg					
Styrene			U	ND	ug/kg					
Tetrachloroethylene			U	ND	ug/kg					

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
Toluene			U	ND	ug/kg				PXY1	02/07/20 09:22
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					
trans-1,3-Dichloropropylene			U	ND	ug/kg					
**1,2-Dichloroethane-d4	50.0			48.5	ug/L		97	(81%-124%)		
**Bromofluorobenzene	50.0			51.1	ug/L		102	(70%-130%)		
**Toluene-d8	50.0			50.7	ug/L		101	(81%-120%)		

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
QC1204495064 MB											
1,1,1-Trichloroethane			U	ND	ug/kg				PXY1	02/10/20	12:41
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						
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						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
2-Butanone			U	ND	ug/kg				PXY1	02/10/20	12:41
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						
Chlorobenzene			U	ND	ug/kg						
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 1967050											
Cyclohexane			U	ND	ug/kg				PXY1	02/10/20	12:41
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						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Trichlorotrifluoroethane			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 1967050										
cis-1,2-Dichloroethylene			U	ND	ug/kg				PXY1	02/10/20 12:41
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			48.9	ug/L		98	(81%-124%)		
**Bromofluorobenzene	50.0			51.5	ug/L		103	(70%-130%)		
**Toluene-d8	50.0			51.3	ug/L		103	(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

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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
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.

QC Summary

Report Date: February 12, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1964848										
QC1204488715 502680001 DUP										
Uranium-233/234		7.14		6.58	pCi/g	8.08		(0%-20%)	HAKB	02/07/20 08:34
	Uncertainty	+/-0.587		+/-0.573						
Uranium-235/236		0.387		0.375	pCi/g	3.2		(0%-20%)		
	Uncertainty	+/-0.155		+/-0.157						
Uranium-238		3.24		3.15	pCi/g	2.77		(0%-20%)		
	Uncertainty	+/-0.396		+/-0.397						
QC1204488716 LCS										
Uranium-233/234				5.35	pCi/g					02/07/20 08:34
	Uncertainty			+/-0.495						
Uranium-235/236				0.168	pCi/g					
	Uncertainty			+/-0.104						
Uranium-238	5.10			5.35	pCi/g		105	(75%-125%)		
	Uncertainty			+/-0.494						
QC1204488714 MB										
Uranium-233/234			U	-0.00935	pCi/g					02/07/20 08:34
	Uncertainty			+/-0.0380						
Uranium-235/236			U	0.000515	pCi/g					
	Uncertainty			+/-0.0382						
Uranium-238			U	0.0158	pCi/g					
	Uncertainty			+/-0.0364						
Batch 1964849										
QC1204488718 502680021 DUP										
Uranium-233/234		1.19		1.02	pCi/g	15.4		(0%-20%)	MXS2	02/06/20 17:27
	Uncertainty	+/-0.233		+/-0.233						
Uranium-235/236	U	0.0436	U	0.0173	pCi/g	N/A		N/A		
	Uncertainty	+/-0.0646		+/-0.0592						
Uranium-238		0.664		0.637	pCi/g	4.22		(0%-20%)		
	Uncertainty	+/-0.175		+/-0.185						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1964849										
QC1204488719 LCS										
Uranium-233/234				4.81	pCi/g				MXS2	02/06/20 17:27
	Uncertainty			+/-0.440						
Uranium-235/236				0.299	pCi/g					
	Uncertainty			+/-0.126						
Uranium-238	5.08			5.32	pCi/g		105	(75%-125%)		
	Uncertainty			+/-0.461						
QC1204488717 MB										
Uranium-233/234			U	-0.0112	pCi/g					02/06/20 17:23
	Uncertainty			+/-0.0641						
Uranium-235/236			U	0.0164	pCi/g					
	Uncertainty			+/-0.0615						
Uranium-238			U	0.0265	pCi/g					
	Uncertainty			+/-0.0609						
Batch 1964850										
QC1204488721 502680041 DUP										
Uranium-233/234		1.28		0.907	pCi/g	34*		(0%-20%)	BXA4	02/06/20 17:27
	Uncertainty	+/-0.240		+/-0.214						
Uranium-235/236	U	0.0388		0.0785	pCi/g	15.3		(0% - 100%)		
	Uncertainty	+/-0.0558		+/-0.0757						
Uranium-238		0.983		1.01	pCi/g	2.39		(0%-20%)		
	Uncertainty	+/-0.209		+/-0.224						
QC1204488722 LCS										
Uranium-233/234				5.10	pCi/g					02/06/20 17:27
	Uncertainty			+/-0.450						
Uranium-235/236				0.251	pCi/g					
	Uncertainty			+/-0.114						
Uranium-238	5.22			4.98	pCi/g		95.4	(75%-125%)		
	Uncertainty			+/-0.444						
QC1204488720 MB										
Uranium-233/234			U	-0.0241	pCi/g					02/06/20 17:27
	Uncertainty			+/-0.0335						
Uranium-235/236			U	-0.00457	pCi/g					
	Uncertainty			+/-0.0394						

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1964850										
Uranium-238			U	0.00801	pCi/g				BXA4	02/06/20 17:27
	Uncertainty			+/-0.0445						
Rad Liquid Scintillation										
Batch 1964841										
QC1204488700 502680001 DUP										
Technetium-99	U	-1.31	U	-0.580	pCi/g	N/A		N/A	JJ3	02/10/20 20:41
	Uncertainty	+/-2.10		+/-2.11						
QC1204488701 LCS										
Technetium-99	55.9			60.8	pCi/g		109	(75%-125%)		02/10/20 20:58
	Uncertainty			+/-3.80						
QC1204488699 MB										
Technetium-99			U	0.158	pCi/g					02/10/20 20:24
	Uncertainty			+/-1.96						
Batch 1964847										
QC1204488712 502680016 DUP										
Technetium-99	U	-1.09	U	-1.40	pCi/g	N/A		N/A	JJ3	02/11/20 02:26
	Uncertainty	+/-1.49		+/-1.54						
QC1204488713 LCS										
Technetium-99	55.9			54.2	pCi/g		96.8	(75%-125%)		02/11/20 02:47
	Uncertainty			+/-2.81						
QC1204488711 MB										
Technetium-99			U	-0.421	pCi/g					02/11/20 02:05
	Uncertainty			+/-1.39						
Batch 1964866										
QC1204488750 502680031 DUP										
Technetium-99	U	-0.615	U	0.465	pCi/g	N/A		N/A	JJ3	02/10/20 20:28
	Uncertainty	+/-1.94		+/-1.71						
QC1204488751 LCS										
Technetium-99	55.7			60.7	pCi/g		109	(75%-125%)		02/10/20 20:51
	Uncertainty			+/-3.37						
QC1204488749 MB										
Technetium-99			U	-0.543	pCi/g					02/10/20 20:06
	Uncertainty			+/-1.61						

Notes:

QC Summary

Workorder: **502680**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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.

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: 1965433

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-039 REV# 13
Preparation Batch: 1965432

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680002	S-3-2
502680005	C-16-2
502680006	C-16-3
502680011	C-33-3
502680016	S-50-3
502680021	C-43-3
502680024	C-43-6
1204490088	Method Blank (MB)
1204490089	Laboratory Control Sample (LCS)
1204490090	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on a "dry weight" 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: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260B
Analytical Procedure: GL-OA-E-038 REV# 28
Analytical Batch: 1967050

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-039 REV# 13
Preparation Batch: 1967049

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680027	C-39-3

502680030	C-67-1
502680035	C-59-6
502680037	C-51-8
502680041	C-58-12
502680043	C-52-14
502680045	C-51-16
1204493485	Method Blank (MB)
1204493486	Laboratory Control Sample (LCS)
1204493487	Laboratory Control Sample Duplicate (LCSD)
1204495064	Method Blank (MB)
1204495065	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

Laboratory Control Sample (LCS) Recovery
The LCS/and or LCSD (See Below) recoveries were not within the acceptance limits for all analytes. The unacceptable analytes were not detected in the samples associated with the laboratory control samples. Therefore, the data were reported.

Sample	Analyte	Value
1204493486 (LCS)	Dichlorodifluoromethane	140* (70%-130%)
1204493487 (LCSD)	Dichlorodifluoromethane	131* (70%-130%)

Internal Standard (ISTD) Acceptance
In sample , internal standard response were outside the required acceptance criteria. Sample re-analysis did not confirmed matrix interference. The re-analysis results are reported. 502680041 (C-58-12).

Technical Information

Sample Re-extraction/Re-analysis
Sample 502680041 (C-58-12) 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: 1964991

Preparation Method: SW846 3050B
Preparation Procedure: GL-MA-E-009 REV# 29

Preparation Batch: 1964990

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680005	C-16-2
502680016	S-50-3
502680024	C-43-6
502680031	C-67-2
502680045	C-51-16
1204489016	Method Blank (MB)**ICP-MS**
1204489017	Laboratory Control Sample (LCS)
1204489021	Laboratory Control Sample (LCS)
1204489020	502680005(C-16-2L) Serial Dilution (SD)
1204489018	502680005(C-16-2S) Matrix Spike (MS)
1204489022	502680005(C-16-2S) Matrix Spike (MS)
1204489019	502680005(C-16-2SD) Matrix Spike Duplicate (MSD)
1204489023	502680005(C-16-2SD) Matrix Spike Duplicate (MSD)
1204496218	502680005(C-16-2PS) 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
1204489018 (C-16-2MS)	Uranium-235	-87.2* (75%-125%)
	Uranium-238	49.6* (75%-125%)
1204489019 (C-16-2MSD)	Uranium-235	-39.5* (75%-125%)
	Uranium-238	67.6* (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. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	502680				
	005	016	024	031	045
Uranium-234	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X

General Chemistry

Product: **Ion Chromatography**
Analytical Method: SW846 9056A
Analytical Procedure: GL-GC-E-086 REV# 27
Analytical Batches: 1965068 and 1965067

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680001	S-3-1
502680002	S-3-2
502680003	S-3-3
502680004	C-16-1
502680006	C-16-3
502680007	C-16-4
502680008	C-16-5
502680009	C-33-1
502680010	C-33-2
502680011	C-33-3
502680012	C-33-4
502680013	C-33-5
502680014	S-50-1
502680015	S-50-2
502680017	S-50-4
502680018	S-50-5
502680019	C-43-1
502680020	C-43-2
1204489195	Method Blank (MB)
1204489196	Laboratory Control Sample (LCS)
1204489197	502680001(S-3-1) Sample Duplicate (DUP)
1204489198	502680002(S-3-2) Sample Duplicate (DUP)
1204489199	502680001(S-3-1) Matrix Spike (MS)
1204489200	502680002(S-3-2) 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	1204489199 (S-3-1MS)	25.3* (75%-125%)
	1204489200 (S-3-2MS)	33.8* (75%-125%)

Product: **Ion Chromatography**
Analytical Method: SW846 9056A
Analytical Procedure: GL-GC-E-086 REV# 27
Analytical Batches: 1965070 and 1965069

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680021	C-43-3
502680022	C-43-4
502680023	C-43-5
502680025	C-39-1
502680026	C-39-2
502680027	C-39-3
502680028	C-39-4
502680029	C-39-5
502680030	C-67-1
502680032	C-67-3
502680033	C-59-4
502680034	C-59-5
502680035	C-59-6
502680036	C-51-7
502680039	C-58-10
502680040	C-58-11
502680041	C-58-12
502680042	C-52-13
502680043	C-52-14
502680044	C-52-15
1204489201	Method Blank (MB)
1204489202	Laboratory Control Sample (LCS)
1204489203	502680021(C-43-3) Sample Duplicate (DUP)
1204489204	502680022(C-43-4) Sample Duplicate (DUP)
1204489205	502680021(C-43-3) Matrix Spike (MS)

1204489206 502680022(C-43-4) 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	1204489206 (C-43-4MS)	46.2* (75%-125%)

Product: **Ion Chromatography**
Analytical Method: SW846 9056A
Analytical Procedure: GL-GC-E-086 REV# 27
Analytical Batches: 1967554 and 1967553

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680005	C-16-2
502680016	S-50-3
502680024	C-43-6
502680031	C-67-2
502680037	C-51-8
502680038	C-51-9
502680045	C-51-16
1204494591	Method Blank (MB)
1204494592	Laboratory Control Sample (LCS)
1204494593	502680005(C-16-2) Sample Duplicate (DUP)
1204494595	502680005(C-16-2) 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	1204494595 (C-16-2MS)	20.6* (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: 1964848

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964679

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680001	S-3-1
502680002	S-3-2
502680003	S-3-3
502680004	C-16-1
502680005	C-16-2
502680006	C-16-3
502680007	C-16-4
502680008	C-16-5
502680009	C-33-1
502680010	C-33-2
502680011	C-33-3
502680012	C-33-4
502680013	C-33-5
502680014	S-50-1
502680015	S-50-2
502680016	S-50-3
502680017	S-50-4
502680018	S-50-5
502680019	C-43-1
502680020	C-43-2
1204488714	Method Blank (MB)
1204488715	502680001(S-3-1) Sample Duplicate (DUP)
1204488716	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

Additional Comments
The tracer peak centroid for sample 502680010 (C-33-2) is greater than 50 keV from the expected library energy value for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest.

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: 1964849

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964681

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680021	C-43-3
502680022	C-43-4
502680023	C-43-5
502680024	C-43-6
502680025	C-39-1
502680026	C-39-2
502680027	C-39-3
502680028	C-39-4
502680029	C-39-5
502680030	C-67-1
502680031	C-67-2
502680032	C-67-3
502680033	C-59-4
502680034	C-59-5
502680035	C-59-6
502680036	C-51-7
502680037	C-51-8
502680038	C-51-9
502680039	C-58-10
502680040	C-58-11
1204488717	Method Blank (MB)
1204488718	502680021(C-43-3) Sample Duplicate (DUP)
1204488719	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 502680040 (C-58-11) was recounted due to a peak shift. The recount is reported.

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: 1964850

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964683

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680041	C-58-12
502680042	C-52-13
502680043	C-52-14
502680044	C-52-15
502680045	C-51-16
1204488720	Method Blank (MB)
1204488721	502680041(C-58-12) Sample Duplicate (DUP)
1204488722	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

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
1204488721 (C-58-12DUP)	Uranium-233/234	RPD 34* (0.00%-20.00%) RER 1.91 (0-3)

Product: **Dry Weight**
Analytical Method: ASTM D 2216 (Modified)
Analytical Procedure: GL-OA-E-020 REV# 13
Analytical Batch: 1964679

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964679

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680001	S-3-1
502680002	S-3-2
502680003	S-3-3
502680004	C-16-1
502680005	C-16-2
502680006	C-16-3
502680007	C-16-4
502680008	C-16-5
502680009	C-33-1
502680010	C-33-2
502680011	C-33-3
502680012	C-33-4
502680013	C-33-5
502680014	S-50-1
502680015	S-50-2
502680016	S-50-3
502680017	S-50-4
502680018	S-50-5
502680019	C-43-1
502680020	C-43-2
1204488374	502680001(S-3-1) 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: 1964681

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964681

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680021	C-43-3
502680022	C-43-4
502680023	C-43-5
502680024	C-43-6
502680025	C-39-1
502680026	C-39-2
502680027	C-39-3
502680028	C-39-4
502680029	C-39-5
502680030	C-67-1
502680031	C-67-2
502680032	C-67-3
502680033	C-59-4
502680034	C-59-5
502680035	C-59-6
502680036	C-51-7
502680037	C-51-8
502680038	C-51-9
502680039	C-58-10
502680040	C-58-11
1204488375	502680021(C-43-3) 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: 1964683

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1964683

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680041	C-58-12
502680042	C-52-13
502680043	C-52-14
502680044	C-52-15
502680045	C-51-16
1204488376	502680041(C-58-12) 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: 1964841

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680001	S-3-1
502680002	S-3-2
502680003	S-3-3
502680004	C-16-1
502680005	C-16-2
502680006	C-16-3
502680007	C-16-4
502680008	C-16-5
502680009	C-33-1
502680010	C-33-2
502680011	C-33-3
502680012	C-33-4
502680013	C-33-5
502680014	S-50-1
502680015	S-50-2
1204488699	Method Blank (MB)
1204488700	502680001(S-3-1) Sample Duplicate (DUP)
1204488701	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

Recounts
Samples were recounted due to low recovery. The recounts are 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: 1964847

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680016	S-50-3
502680017	S-50-4
502680018	S-50-5
502680019	C-43-1
502680020	C-43-2
502680021	C-43-3
502680022	C-43-4
502680023	C-43-5
502680024	C-43-6
502680025	C-39-1
502680026	C-39-2
502680027	C-39-3
502680028	C-39-4
502680029	C-39-5
502680030	C-67-1
1204488711	Method Blank (MB)
1204488712	502680016(S-50-3) Sample Duplicate (DUP)
1204488713	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

Recounts
Samples were recounted due to high recovery. The recounts are 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: 1964866

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
502680031	C-67-2
502680032	C-67-3
502680033	C-59-4
502680034	C-59-5
502680035	C-59-6
502680036	C-51-7
502680037	C-51-8
502680038	C-51-9
502680039	C-58-10
502680040	C-58-11
502680041	C-58-12
502680042	C-52-13
502680043	C-52-14
502680044	C-52-15
502680045	C-51-16
1204488749	Method Blank (MB)
1204488750	502680031(C-67-2) Sample Duplicate (DUP)
1204488751	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

Recounts
Samples were recounted due to low recovery. The recounts are 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 174 of 178 SDG: 502680

Page: 1 of 5
Project #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461 Ln 2

502680

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: ANALYTICAL-ENV-LEGCYWSTE Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: R. Crews / C. Logsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	F	TC-99	VOCs	<-- Preservative Type (6)	Comments
S-3-1	01-23-20	1242	G		SO			1	X		X	X			Note: extra sample is required for sample specific QC
S-3-2	01-23-20	1247	G		SO			2	X		X	X	X		
S-3-3	01-23-20	1254	G		SO			1	X		X	X			
C-16-1	01-23-20	1303	G		SO			1	X		X	X			
C-16-2	01-23-20	1308	G		SO			2	X	X	X	X	X		
C-16-3	01-23-20	1312	G		SO			2	X		X	X	X		
C-16-4	01-23-20	1320	G		SO			1	X		X	X			
C-16-5	01-23-20	1324	G		SO			1	X		X	X			
C-33-1	01-23-20	1340	G		SO			1	X		X	X			
C-33-2	01-23-20	1345	G		SO			1	X		X	X			

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 R. Crews	1/29/2020	1037	1 Secure Location	1/29/2020	1037
2 Secure Location	1/29/2020	1052	2	1.27.20	1052
3	1.27.20	1512	3	1/29/20	1512

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

TAT Requested: Normal: X Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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: 2 of 5
Project #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461 Ln 2

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: ANALYTICAL-ENV-LEGCYWSTE Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: R. Cruz/C. Logsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	F	TC-99	VOCs					<-- Preservative Type (6)
C-33-3	01-23-20	1349	G		SO			2	X		X	X	X					Comments: Note: extra sample is required for sample specific QC
C-33-4	01-23-20	1355	G		SO			1	X		X	X						
C-33-5	01-23-20	1359	G		SO			1	X		X	X						
S-50-1	01-23-20	1408	G		SO			1	X		X	X						
S-50-2	01-23-20	1412	G		SO			1	X		X	X						
S-50-3	01-23-20	1418	G		SO			2	X	X	X	X	X					
S-50-4	01-23-20	1423	G		SO			1	X		X	X						
S-50-5	01-23-20	1427	G		SO			1	X		X	X						
C-43-1	01-23-20	1438	G		SO			1	X		X	X						
C-43-2	01-23-20	1442	G		SO			1	X		X	X						

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	R. Cruz	1/29/2020	1037	1 Secure Location	1/29/2020	1037
2	Secure Location	1/29/2020	1052	2		1052
3		1/29/20	1512	3 R. Allmen	1/29/20	1512

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

TAT Requested: Normal: X Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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.

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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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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 5
Project #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461 Ln 2

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: ANALYTICAL-ENV-LEGCYWSTE Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: R. Crews / C. Logsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	F	TC-99	VOCs						<-- Preservative Type (6)
C-43-3	01-23-20	1446	G		SO			2	X		X	X	X						Comments: Note: extra sample is required for sample specific QC
C-43-4	01-23-20	1451	G		SO			1	X		X	X							
C-43-5	01-23-20	1455	G		SO			1	X		X	X							
C-43-6	01-23-20	1459	G		SO			2	X	X	X	X	X						
C-39-1	01-28-20	1024	G		SO			1	X		X	X							
C-39-2	01-28-20	1028	G		SO			1	X		X	X							
C-39-3	01-28-20	1031	G		SO			2	X		X	X	X						
C-39-4	01-28-20	1037	G		SO			1	X		X	X							
C-39-5	01-28-20	1042	G		SO			1	X		X	X							
C-67-1	01-28-20	1103	G		SO			2	X		X	X	X						

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 R. Crews	1/29/2020	1037	1 Secure Location	1/29/2020	1037
2 Secure Location	1/29/2020	1052	2 [signature]	1-29-20	1052
3 [signature]	1-29-20	1562	3 [signature]	1/29/20	15:12

>> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

TAT Requested: Normal: X Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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

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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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
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Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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 174 of 178 SDG: 502680

Page 175 of 180 SDG: 502680

Page: 4 of 5
Project #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461 Ln 2

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: ANALYTICAL-ENV-LEGCYWSTE Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: R. Crews/C. Lobsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	F	TC-99	VOCs					<-- Preservative Type (6)
C-67-2	01-28-20	1108	G		SO			1	X	X	X	X						
C-67-3	01-28-20	1119	G		SO			1	X		X	X						
C-59-4	01-28-20	1126	G		SO			1	X		X	X						
C-59-5	01-28-20	1131	G		SO			1	X		X	X						
C-59-6	01-28-20	1138	G		SO			2	X		X	X	X					
C-51-7	01-28-20	1159	G		SO			1	X		X	X						
C-51-8	01-28-20	1203	G		SO			2	X		X	X	X					
C-51-9	01-28-20	1208	G		SO			1	X		X	X						
C-58-10	01-28-20	1217	G		SO			1	X		X	X						
C-58-11	01-28-20	1222	G		SO			1	X		X	X						

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	R. Crews	1/29/2020	1037	Secure Location	1/29/2020	1037
2	Secure Location	1/29/2020	1052			
3		1/29/20	1540	R. Olmer	1/29/20	1852

TAT Requested: Normal: X Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

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

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As = Arsenic **Hg**= Mercury
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FL = Flammable/Ignitable
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TSCA Regulated
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Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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 5 of 5 SDG: 580680

Page: 5 of 5
Project #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461 Ln 2

GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

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GEL Laboratories, LLC
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Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Westinghouse Phone # 803.647.3171

Project/Site Name: ANALYTICAL-ENV-LEGCYWSTE Fax # 803.695.3964

Address: 5801 Bluff Road, Hopkins, SC 29061

Collected By: R. Crews / C. Logsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	F	TC-99	VOCs						<-- Preservative Type (6)
C-58-12	01-28-20	1228	G		SO			2	X		X	X	X						
C-52-13	01-28-20	1235	G		SO			1	X		X	X							
C-52-14	01-28-20	1241	G		SO			2	X		X	X	X						
C-52-15	01-28-20	1245	G		SO			1	X		X	X							
C-51-16	01-28-20	1252	G		SO			2	X	X	X	X	X						

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	R Crews	1/29/2020	1037	Secure Location	1/29/2020	1037
2	Secure Location	1/29/2020	1052			1052
3			1542	R. Allen	1/29/20	15:12

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

TAT Requested: Normal: X Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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:

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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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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.)*

GEL Laboratories LLC

KG

SAMPLE RECEIPT & REVIEW FORM

502680

Client: WNUC	SDG/AR/COC/Work Order:
Received By: AJA	Date Received: 1/29/20
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services 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?		✓	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?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: ~~Wet Ice~~ Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 1°
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR4-16 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			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) Are liquid VOA vials free of headspace? Yes___ No___ NA ✓ Sample ID's and containers affected:
8	Samples received within holding time?			✓	ID's and tests affected: Soil kits with date 1/23 not received frozen
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials EH Date 1/31/20 Page 1 of 1

GL-CHL-SR-001 Rev 6

List of current GEL Certifications as of 12 February 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

Attachment C

Southern Storage Area Operable Unit Soil Sampling- GEL Analytical Results

Second Sampling Event

S-3

Sampling conducted: March 6, 2020
GEL Work Order: 506342
Report Date: March 13, 2020

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

March 13, 2020

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

Re: ENV-CONSENTA-4500778461
Work Order: 506342

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 06, 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. 4707.

Sincerely,

Katelyn Gray

Katelyn Gray
Project Manager

Purchase Order: PO 4500778461
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: 506342 GEL Work Order: 506342

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, Katelyn Gray.

Reviewed by Katelyn Gray

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

Certificate of Analysis

Report Date: March 13, 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: S-3-A
Sample ID: 506342001
Matrix: Solid
Collect Date: 06-MAR-20 09:00
Receive Date: 06-MAR-20
Collector: Client
Moisture: 9.84%

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235		53.5	2.08	14.6	ug/kg	94.0	2	PRB	03/13/20	0322	1977755	1
Uranium-238		4330	13.8	41.7	ug/kg	94.0	2					
Uranium-234	U	ND	2.08	10.4	ug/kg	94.0	2	PRB	03/13/20	1546	1977755	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	03/09/20	0910	1977754

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3050B/6020B	
2	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

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

Certificate of Analysis

Report Date: March 13, 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: S-3-A
Sample ID: 506342001
Matrix: Solid
Collect Date: 06-MAR-20 09:00
Receive Date: 06-MAR-20
Collector: Client
Moisture: 9.84%

Project: WNUC00901
Client ID: WNUC009

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		12.5	+/-1.26	0.286	0.500	pCi/g			MP2	03/11/20	1405	1978021	1
Uranium-235/236		0.513	+/-0.296	0.193	0.500	pCi/g							
Uranium-238		5.87	+/-0.861	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	LYT1	03/09/20	0821	1977758

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"			82.8	(15%-125%)

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

Column headers are defined as follows:

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

Certificate of Analysis

Report Date: March 13, 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: S-3-B
Sample ID: 506342002
Matrix: Solid
Collect Date: 06-MAR-20 09:10
Receive Date: 06-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

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		7.81	+/-1.03	0.247	0.500	pCi/g			MP2	03/11/20	1405	1978021	1
Uranium-235/236		0.302	+/-0.240	0.130	0.500	pCi/g							
Uranium-238		4.53	+/-0.784	0.168	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	LYT1	03/09/20	0821	1977758

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"			80.2	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: March 13, 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: S-3-C
Sample ID: 506342003
Matrix: Solid
Collect Date: 06-MAR-20 09:18
Receive Date: 06-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

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		1.69	+/-0.495	0.301	0.500	pCi/g			MP2	03/11/20	1405	1978021	1
Uranium-235/236	U	0.0327	+/-0.123	0.207	0.500	pCi/g							
Uranium-238		1.11	+/-0.400	0.244	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	LYT1	03/09/20	0821	1977758

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"			81.1	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: March 13, 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:	S-3-D	Project:	WNUC00901
Sample ID:	506342004	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	06-MAR-20 09:23		
Receive Date:	06-MAR-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		7.18	+/-1.14	0.389	0.500	pCi/g			MP2	03/11/20	1405	1978021	1
Uranium-235/236	U	0.255	+/-0.274	0.312	0.500	pCi/g							
Uranium-238		2.34	+/-0.659	0.353	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	LYT1	03/09/20	0821	1977758

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"			62.4	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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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Certificate of Analysis

Report Date: March 13, 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: S-3-E
Sample ID: 506342005
Matrix: Solid
Collect Date: 06-MAR-20 09:29
Receive Date: 06-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

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		9.67	+/-1.08	0.221	0.500	pCi/g			MP2	03/11/20	1405	1978021	1
Uranium-235/236		0.308	+/-0.241	0.253	0.500	pCi/g							
Uranium-238		4.32	+/-0.726	0.240	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	LYT1	03/09/20	0821	1977758

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"			89.5	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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

QC Summary

Report Date: March 13, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **506342**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1977755											
QC1204518742 LCS											
Uranium-235	34.9				33.9	ug/kg		97.1	(80%-120%)	PRB	03/13/20 03:20
Uranium-238	4810				4640	ug/kg		96.5	(80%-120%)		
QC1204518751 LCS											
Uranium-234	49.4				55.5	ug/kg		112	(80%-120%)		03/13/20 15:44
QC1204518741 MB											
Uranium-234				U	ND	ug/kg					03/13/20 15:42
Uranium-235				U	ND	ug/kg					03/13/20 03:19
Uranium-238				U	ND	ug/kg					
QC1204518743 506342001 MS											
Uranium-235	38.8		53.5		103	ug/kg		127*	(75%-125%)		03/13/20 03:24
Uranium-238	5350		4330		10500	ug/kg		116	(75%-125%)		
QC1204518752 506342001 MS											
Uranium-234	59.1	U	ND		71.8	ug/kg		121	(75%-125%)		03/13/20 16:22
QC1204518744 506342001 MSD											
Uranium-235	38.0		53.5		124	ug/kg	18.6	185*	(0%-20%)		03/13/20 03:25
Uranium-238	5240		4330		12200	ug/kg	15	151*	(0%-20%)		
QC1204518753 506342001 MSD											
Uranium-234	60.9	U	ND		73.7	ug/kg	2.65	120	(0%-20%)		03/13/20 16:24

QC Summary

Workorder: **506342**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1977755										
QC1204523841 506342001 PS										
Uranium-235	0.180	0.257		0.441	ug/L		102	(75%-125%)	PRB	03/13/20 03:27
Uranium-238	24.8	20.8		45.5	ug/L		99.6	(75%-125%)		
QC1204518745 506342001 SDILT										
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)		03/13/20 15:57
Uranium-235		0.257	J	0.0509	ug/L	.78		(0%-20%)		03/13/20 03:29
Uranium-238		20.8		3.86	ug/L	7.01		(0%-20%)		

Notes:

The Qualifiers in this report are defined as follows:

<	Result is less than value reported
>	Result is greater than value reported
E	%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
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
H	Analytical holding time was exceeded
J	See case narrative for an explanation
J	Value is estimated
N	Metals--The Matrix spike sample recovery is not within specified control limits
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.
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

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QC Summary

Workorder: **506342**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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.

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

QC Summary

Report Date: March 13, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **506342**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 1978021										
QC1204519386 506342001 DUP										
Uranium-233/234		12.5		10.6	pCi/g	17.1		(0%-20%)	MP2	03/11/20 15:11
	Uncertainty	+/-1.26		+/-1.25						
Uranium-235/236		0.513	U	0.286	pCi/g	48.8		(0% - 100%)		
	Uncertainty	+/-0.296		+/-0.267						
Uranium-238		5.87		5.55	pCi/g	5.63		(0%-20%)		
	Uncertainty	+/-0.861		+/-0.914						
QC1204519387 LCS										
Uranium-233/234				11.7	pCi/g					03/11/20 15:11
	Uncertainty			+/-1.27						
Uranium-235/236				0.771	pCi/g					
	Uncertainty			+/-0.372						
Uranium-238	11.9			13.8	pCi/g		116	(75%-125%)		
	Uncertainty			+/-1.37						
QC1204519385 MB										
Uranium-233/234			U	-0.0283	pCi/g					03/11/20 14:05
	Uncertainty			+/-0.0934						
Uranium-235/236			U	-0.0187	pCi/g					
	Uncertainty			+/-0.0827						
Uranium-238			U	-0.0378	pCi/g					
	Uncertainty			+/-0.0716						

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

QC Summary

Workorder: **506342**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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 #: 506342

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3050B/6020B
Analytical Procedure: GL-MA-E-014 REV# 33
Analytical Batch: 1977755

Preparation Method: SW846 3050B
Preparation Procedure: GL-MA-E-009 REV# 29
Preparation Batch: 1977754

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
506342001	S-3-A
1204518741	Method Blank (MB)**ICP-MS**
1204518742	Laboratory Control Sample (LCS)
1204518751	Laboratory Control Sample (LCS)
1204518745	506342001(S-3-AL) Serial Dilution (SD)
1204518743	506342001(S-3-AS) Matrix Spike (MS)
1204518752	506342001(S-3-AS) Matrix Spike (MS)
1204518744	506342001(S-3-ASD) Matrix Spike Duplicate (MSD)
1204518753	506342001(S-3-ASD) Matrix Spike Duplicate (MSD)
1204523841	506342001(S-3-APS) 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
1204518743 (S-3-AMS)	Uranium-235	127* (75%-125%)
1204518744 (S-3-AMSD)	Uranium-235	185* (75%-125%)
	Uranium-238	151* (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. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	506342
	001
Uranium-234	2X
Uranium-235	2X
Uranium-238	2X

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: 1978021

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1977758

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
506342001	S-3-A
506342002	S-3-B
506342003	S-3-C
506342004	S-3-D
506342005	S-3-E
1204519385	Method Blank (MB)
1204519386	506342001(S-3-A) Sample Duplicate (DUP)
1204519387	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" 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**
Preparation Method: ASTM D 2216 (Modified)
Preparation Procedure: GL-OA-E-020 REV# 13
Preparation Batch: 1977758

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1977758

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
506342001	S-3-A
506342002	S-3-B
506342003	S-3-C
506342004	S-3-D
506342005	S-3-E
1204518750	506342001(S-3-A) 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.

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 #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461-Ln2-ANAL-ENV-LEGCYWaste

506342

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: Randy Crews RCrews Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	<-- Preservative Type (6)	Comments
S-3-A	3/6/2020	0900	G	N	SO			2	X	X		Note: extra sample is required for sample specific QC
S-3-B	3/6/2020	0910	G	N	SO			1	X			
S-3-C	3/6/2020	0918	G	N	SO			1	X			
S-3-D	3/6/2020	0923	G	N	SO			1	X			
S-3-E	3/6/2020	0929	G	N	SO			1	X			

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Randy Crews RCrews	3/6/2020	13:30	1 A. Allen	3/6/20	13:30
2			2		
3			3		

TAT Requested: Normal: ____ Rush: X Specify: 5 day (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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:*** 2 °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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 17 of 50 SDG 506342

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: WNUC	SDG/AR/COC/Work Order: 506342
Received By: ZKW/RSO	Date Received: 3/6/20
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier (Other) Client Drop off

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?		✓	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?	✓		COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 300 (CPM) mR/Hr Classified as: (Rad 1) (Rad 2) Rad 3
D) Did the client designate samples are hazardous?	✓		COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?	✓		If D or E is yes, select Hazards below. PCB's (Flammable) Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR3-18 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			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) Are liquid VOA vials free of headspace? Yes___ No___ NA✓ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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? 3/6/20	✓		✓	Circle Applicable: No container count on COC Other (describe) only recd one cont. for S-3-A
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

*SOLX Samples recd as Rad 2. -304 Samples recd as Rad 1. S-3 Samples recd as Non Rad.

PM (or PMA) review: Initials NRG Date 03/09/2020 Page 1 of 1

GL-CHL-SR-001 Rev 6

List of current GEL Certifications as of 13 March 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	T104704235−20−16
Utah NELAP	SC000122020−32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Attachment D

Southern Storage Area Operable Unit Soil Sampling- GEL Analytical Results

Confirmatory Sampling Event

S-3	C-16

Sampling conducted: March 23, 2020
GEL Work Order: 507831
Report Date: April 1, 2020

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

April 01, 2020

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

Re: ENV-CONSENTA-4500778461
Work Order: 507831

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 25, 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. 4707.

Sincerely,

Katelyn Gray

Katelyn Gray
Project Manager

Purchase Order: PO 4500778461
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: 507831 GEL Work Order: 507831

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, Katelyn Gray.

Reviewed by Katelyn Gray

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

Certificate of Analysis

Report Date: April 1, 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: S-3-b
Sample ID: 507831002
Matrix: Solid
Collect Date: 23-MAR-20 11:31
Receive Date: 25-MAR-20
Collector: Client
Moisture: 9.61%

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235		16.1	2.02	14.1	ug/kg	91.2	2	PRB	03/31/20	0815	1984319	1
Uranium-238		1490	13.3	40.4	ug/kg	91.2	2					
Uranium-234	U	ND	2.02	10.1	ug/kg	91.2	2	PRB	03/31/20	1009	1984319	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	03/26/20	0950	1984317

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3050B/6020B	
2	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

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

Certificate of Analysis

Report Date: April 1, 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-16-b
Sample ID: 507831005
Matrix: Solid
Collect Date: 23-MAR-20 13:31
Receive Date: 25-MAR-20
Collector: Client
Moisture: 11.2%

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3050B/6020B Uranium-234/235/238 "Dry Weight Corrected"												
Uranium-235	J	10.1	2.03	14.2	ug/kg	90.1	2	PRB	03/31/20	0824	1984319	1
Uranium-238		1180	13.4	40.6	ug/kg	90.1	2					
Uranium-234	U	ND	2.03	10.1	ug/kg	90.1	2	PRB	03/31/20	1016	1984319	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	ICP-MS 3050BS PREP	SM1	03/26/20	0950	1984317

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3050B/6020B	
2	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

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

Certificate of Analysis

Report Date: April 1, 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: S-3-a
Sample ID: 507831001
Matrix: Solid
Collect Date: 23-MAR-20 11:25
Receive Date: 25-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Solid "Dry Weight Corrected"													
Uranium-233/234		1.19	+/-0.358	0.224	1.00	pCi/g			BXA4	03/28/20	0925	1984666	1
Uranium-235/236		0.0955	+/-0.126	0.0955	1.00	pCi/g							
Uranium-238		1.17	+/-0.347	0.157	1.00	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	03/25/20	1654	1984295

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, Solid "Dry Weight Corrected"			99.3	(15%-125%)

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

Column headers are defined as follows:

DF: Dilution Factor
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

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

Certificate of Analysis

Report Date: April 1, 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: S-3-b
Sample ID: 507831002
Matrix: Solid
Collect Date: 23-MAR-20 11:31
Receive Date: 25-MAR-20
Collector: Client
Moisture: 9.61%

Project: WNUC00901
Client ID: WNUC009

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	+/-0.426	0.360	0.500	pCi/g			BXA4	03/28/20	0933	1984666	1
Uranium-235/236	U	0.201	+/-0.230	0.287	0.500	pCi/g							
Uranium-238		0.840	+/-0.377	0.307	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	03/25/20	1654	1984295

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"			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
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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Certificate of Analysis

Report Date: April 1, 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: S-3-c
Sample ID: 507831003
Matrix: Solid
Collect Date: 23-MAR-20 11:37
Receive Date: 25-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Solid "Dry Weight Corrected"													
Uranium-233/234		0.821	+/-0.342	0.240	1.00	pCi/g			BXA4	03/28/20	0925	1984666	1
Uranium-235/236	U	0.0414	+/-0.116	0.124	1.00	pCi/g							
Uranium-238		0.738	+/-0.324	0.221	1.00	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	03/25/20	1654	1984295

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, Solid "Dry Weight Corrected"			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
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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Certificate of Analysis

Report Date: April 1, 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-16-a
Sample ID: 507831004
Matrix: Solid
Collect Date: 23-MAR-20 13:26
Receive Date: 25-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Solid "Dry Weight Corrected"													
Uranium-233/234		1.01	+/-0.378	0.306	1.00	pCi/g			BXA4	03/28/20	0925	1984666	1
Uranium-235/236	U	0.0599	+/-0.138	0.218	1.00	pCi/g							
Uranium-238		0.895	+/-0.351	0.257	1.00	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	03/25/20	1654	1984295

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, Solid "Dry Weight Corrected"			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
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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Certificate of Analysis

Report Date: April 1, 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-16-b
Sample ID: 507831005
Matrix: Solid
Collect Date: 23-MAR-20 13:31
Receive Date: 25-MAR-20
Collector: Client
Moisture: 11.2%

Project: WNUC00901
Client ID: WNUC009

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		1.29	+/-0.462	0.314	0.500	pCi/g			BXA4	03/28/20	0933	1984666	1
Uranium-235/236	U	0.122	+/-0.193	0.267	0.500	pCi/g							
Uranium-238		0.823	+/-0.379	0.315	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	03/25/20	1654	1984295

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"			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
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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Certificate of Analysis

Report Date: April 1, 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-16-c
Sample ID: 507831006
Matrix: Solid
Collect Date: 23-MAR-20 13:37
Receive Date: 25-MAR-20
Collector: Client

Project: WNUC00901
Client ID: WNUC009

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Solid "Dry Weight Corrected"													
Uranium-233/234		0.885	+/-0.346	0.289	1.00	pCi/g			BXA4	03/28/20	0925	1984666	1
Uranium-235/236	U	-0.0178	+/-0.0787	0.205	1.00	pCi/g							
Uranium-238		0.834	+/-0.324	0.210	1.00	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	03/25/20	1654	1984295

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, Solid "Dry Weight Corrected"			106	(15%-125%)

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

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

QC Summary

Report Date: April 1, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **507831**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1984319										
QC1204534158 LCS										
Uranium-235	35.6			35.3	ug/kg		98.9	(80%-120%)	PRB	03/31/20 08:13
Uranium-238	4910			4910	ug/kg		99.9	(80%-120%)		
QC1204534162 LCS										
Uranium-234	53.2			63.2	ug/kg		119	(80%-120%)		03/31/20 10:07
QC1204534157 MB										
Uranium-234			U	ND	ug/kg					03/31/20 10:06
Uranium-235			U	ND	ug/kg					03/31/20 08:12
Uranium-238			U	ND	ug/kg					
QC1204534159 507831002 MS										
Uranium-235	39.7	16.1		69.7	ug/kg		135*	(75%-125%)		03/31/20 08:17
Uranium-238	5470	1490		8200	ug/kg		123	(75%-125%)		
QC1204534163 507831002 MS										
Uranium-234	58.2 U	ND		70.4	ug/kg		121	(75%-125%)		03/31/20 10:11
QC1204534160 507831002 MSD										
Uranium-235	39.0	16.1		68.2	ug/kg	2.22	133*	(0%-20%)		03/31/20 08:19
Uranium-238	5370	1490		7930	ug/kg	3.25	120	(0%-20%)		
QC1204534164 507831002 MSD										
Uranium-234	55.3 U	ND		68.4	ug/kg	2.95	124	(0%-20%)		03/31/20 10:13

QC Summary

Workorder: **507831**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1984319										
QC1204537066 507831002 PS										
Uranium-235	0.180	0.0799		0.272	ug/L		107	(75%-125%)	PRB	03/31/20 08:20
QC1204534161 507831002 SDILT										
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)		03/31/20 10:14
Uranium-235		0.0799	J	0.0163	ug/L	2		(0%-20%)		03/31/20 08:22
Uranium-238		7.36		1.43	ug/L	2.78		(0%-20%)		

Notes:

The Qualifiers in this report are defined as follows:

<	Result is less than value reported
>	Result is greater than value reported
E	%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
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
H	Analytical holding time was exceeded
J	See case narrative for an explanation
J	Value is estimated
N	Metals--The Matrix spike sample recovery is not within specified control limits
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.
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

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QC Summary

Workorder: **507831**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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.

QC Summary

Report Date: April 1, 2020

Westinghouse Electric Company, LLC
PO Drawer R
Columbia, South Carolina

Contact: **Ms. Cynthia Logsdon**

Workorder: **507831**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch 1984666											
QC1204534967 507831001 DUP											
Uranium-233/234		1.19		1.31	pCi/g	9.42		(0%-20%)	BXA4	03/28/20	09:25
Uranium-235/236		0.0955	U	0.0213	pCi/g	81.6		N/A			
Uranium-238		1.17		0.871	pCi/g	28.9*		(0%-20%)			
QC1204534968 LCS											
Uranium-233/234				10.7	pCi/g					03/28/20	09:25
Uranium-235/236				0.565	pCi/g						
Uranium-238	12.4			11.4	pCi/g		91.7	(75%-125%)			
QC1204534966 MB											
Uranium-233/234			U	0.0212	pCi/g					03/30/20	09:35
Uranium-235/236			U	0.0613	pCi/g						
Uranium-238			U	0.00261	pCi/g						

Notes:

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

QC Summary

Workorder: **507831**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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 #: 507831

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3050B/6020B
Analytical Procedure: GL-MA-E-014 REV# 33
Analytical Batch: 1984319

Preparation Method: SW846 3050B
Preparation Procedure: GL-MA-E-009 REV# 29
Preparation Batch: 1984317

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
507831002	S-3-b
507831005	C-16-b
1204534157	Method Blank (MB)**ICP-MS**
1204534158	Laboratory Control Sample (LCS)
1204534162	Laboratory Control Sample (LCS)
1204534161	507831002(S-3-bL) Serial Dilution (SD)
1204534159	507831002(S-3-bS) Matrix Spike (MS)
1204534163	507831002(S-3-bS) Matrix Spike (MS)
1204534160	507831002(S-3-bSD) Matrix Spike Duplicate (MSD)
1204534164	507831002(S-3-bSD) Matrix Spike Duplicate (MSD)
1204537066	507831002(S-3-bPS) 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
1204534159 (S-3-bMS)	Uranium-235	135* (75%-125%)
1204534160 (S-3-bMSD)	Uranium-235	133* (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. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	507831	
	002	005
Uranium-234	2X	2X
Uranium-235	2X	2X
Uranium-238	2X	2X

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: 1984666

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1984295

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
507831001	S-3-a
507831002	S-3-b
507831003	S-3-c
507831004	C-16-a
507831005	C-16-b
507831006	C-16-c
1204534966	Method Blank (MB)
1204534967	507831001(S-3-a) Sample Duplicate (DUP)
1204534968	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

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
1204534967 (S-3-aDUP)	Uranium-238	RPD 28.9* (0.00%-20.00%) RER 1.1 (0-3)

Technical Information

Recounts
Sample 1204534966 (MB) was recounted due to results more negative than the three sigma TPU. The second count is reported.

Product: **Dry Weight**
Preparation Method: ASTM D 2216 (Modified)
Preparation Procedure: GL-OA-E-020 REV# 13
Preparation Batch: 1984295

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1984295

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
507831001	S-3-a
507831002	S-3-b
507831003	S-3-c
507831004	C-16-a
507831005	C-16-b
507831006	C-16-c
1204534109	507831002(S-3-b) 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.

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 #
GEL Quote #: WNUC009
COC Number (1):
PO # 4500778461-Ln1-ANAL-ENV-CONCENTA

507831

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty 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

Client Name: Westinghouse Phone # 803.647.3171
Project/Site Name: Fax # 803.695.3964
Address: 5801 Bluff Road, Hopkins, SC 29061
Collected By: Cynthia Logsdon R. Crews For Cynthia Logsdon Send Results To: logsdocj@westinghouse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Isotopic U by Alpha Spec	Isotopic U by ICPMS	<-- Preservative Type (6)	Comments
S-3-a	3/23/2020	1125	G	N	SO			1	X			Note: extra sample is required for sample specific QC
S-3-b	3/23/2020	1131	G	N	SO			1	X	X		
S-3-c	3/23/2020	1137	G	N	SO			1	X			
C-16-a	3/23/2020	1326	G	N	SO			1	X			
C-16-b	3/23/2020	1331	G	N	SO			1	X	X		
C-16-c	3/23/2020	1337	G	N	SO			1	X			

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Cynthia Logsdon	R Crews For Cynthia Logsdon 3/23/2020	1450	1 HP Lab	3/23/2020	1450
2 HP Lab	3/25/2020	0630	2 Randy Crews	3/25/2020	0630
3 Randy Crews	3/25/2020	1027	3 Secure Location	3/25/2020	1027
4 Secure Location	3/25/2020	1050	4	3/25/20	1050

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR)*

TAT Requested: Normal: ____ Rush: X Specify: 5 day (Subject to Surcharge)

Fax Results: [ ] Yes [X] 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:* 2 °C

Sample Collection Time Zone: [ ] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number: Client-Determined 1450 1451 Shyarsa Datum 3.25.20 14:51

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.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

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.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: WWUC	SDG/AR/COC/Work Order: 507831 K.G
Received By: TVL	Date Received: 3.25.20
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services 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?		✓	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?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓		✓	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR-18 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?			✓	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	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) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials NRV Date 03/26/20 Page 1 of 1

List of current GEL Certifications as of 01 April 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	T104704235−20−16
Utah NELAP	SC000122020−32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780