



October 22, 2019

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

Re: ENV-CONSENTA
Work Order: 485262

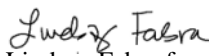
Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 18, 2019. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Rev02: This data package is revised to include the original Tc99 analysis.

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

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

Sincerely,


Lindsay Fabra for
Hope Taylor
Project Manager

Purchase Order: 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: 485262 GEL Work Order: 485262

The Qualifiers in this report are defined as follows:

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

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

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

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

Reviewed by _____

Ludwig Fabra

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-22	Project: WNUC01519
Sample ID: 485262001	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 15-JUL-19 13:15	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.432	0.033	0.100	mg/L		1	JLD1	08/06/19	0208	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1328	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	102	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1144	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		34.5	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		3760	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		844	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1110	110	300	ug/L	1.00	1					
Manganese		189	2.00	10.0	ug/L	1.00	1					
Nickel	J	1.83	1.50	5.00	ug/L	1.00	1					
Potassium		1420	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		3810	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	6.12	3.30	20.0	ug/L	1.00	1					
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.187	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1149	1899832	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-22

Project: WNUC01519

Sample ID: 485262001

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
SW846 3005A	SW846 3005A for 6010D			SXW1	07/26/19		0522		1899015		
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid			AXS5	08/07/19		1414		1904590		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 7470A		
3	SW846 3005A/6010D		
4	EPA 350.1		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-22	Project:	WNUC01519
Sample ID:	485262002	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	15-JUL-19 13:30		
Receive Date:	18-JUL-19		
Collector:	Client		
Moisture:	70%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.64	1.07	3.14	mg/kg	9.41	1	LXA2	08/08/19	2119	1903814	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		113	12.6	37.7	ug/kg	56.5	1	MTM1	08/08/19	1528	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		25800000	21300	62600	ug/kg	93.8	1	TXT1	08/12/19	1736	1899047	3
Antimony	U	ND	1030	6260	ug/kg	93.8	1					
Arsenic	J	4620	1560	9390	ug/kg	93.8	1					
Barium		209000	313	1560	ug/kg	93.8	1					
Beryllium		2020	313	1560	ug/kg	93.8	1					
Cadmium	J	374	313	1560	ug/kg	93.8	1					
Calcium		872000	25000	78200	ug/kg	93.8	1					
Chromium		35100	469	3130	ug/kg	93.8	1					
Cobalt		16600	469	1560	ug/kg	93.8	1					
Copper		33100	939	6260	ug/kg	93.8	1					
Iron		32500000	25000	78200	ug/kg	93.8	1					
Lead		37400	1030	6260	ug/kg	93.8	1					
Magnesium		2180000	26600	93900	ug/kg	93.8	1					
Manganese		389000	626	3130	ug/kg	93.8	1					
Nickel		43300	469	1560	ug/kg	93.8	1					
Potassium		1410000	20000	78200	ug/kg	93.8	1					
Selenium	J	3290	1560	9390	ug/kg	93.8	1					
Silver	U	ND	313	1560	ug/kg	93.8	1					
Sodium	J	69700	21900	78200	ug/kg	93.8	1					
Vanadium		73700	313	1560	ug/kg	93.8	1					
Zinc		138000	1250	6260	ug/kg	93.8	1					
Thallium	U	ND	15600	62600	ug/kg	93.8	10	TXT1	08/12/19	1747	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	J	22.0	6.66	33.3	ug/kg	99.8	2	PRB	08/12/19	0056	1898996	5
Uranium-235		2230	33.3	233	ug/kg	99.8	10	PRB	08/12/19	1223	1898996	6
Uranium-238		80700	220	666	ug/kg	99.8	10					
Nutrient Analysis												

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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-22 Project: WNUC01519
Sample ID: 485262002 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		978	14.4	40.1	mg/kg	48.1	5	KLP1	08/08/19	1254	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	08/08/19	1039	1903812

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
 Project: ENV-CONSENTA

Client Sample ID: SW-21	Project: WNUC01519
Sample ID: 485262003	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 15-JUL-19 16:00	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.433	0.033	0.100	mg/L		1	JLD1	08/06/19	0338	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1340	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	116	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1200	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		28.3	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		3480	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		612	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1020	110	300	ug/L	1.00	1					
Manganese		107	2.00	10.0	ug/L	1.00	1					
Nickel	J	1.86	1.50	5.00	ug/L	1.00	1					
Potassium		1310	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		3590	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	5.61	3.30	20.0	ug/L	1.00	1					
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.244	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1150	1899832	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-21

Project: WNUC01519

Sample ID: 485262003

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
SW846 3005A	SW846 3005A for 6010D			SXW1	07/26/19		0522		1899015		
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid			AXS5	08/07/19		1414		1904590		

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 7470A		
3	SW846 3005A/6010D		
4	EPA 350.1		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-21	Project: WNUC01519
Sample ID: 485262004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 15-JUL-19 16:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 67.7%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.17	1.01	2.97	mg/kg	9.57	1	LXA2	08/08/19	2353	1903814	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		75.8	11.3	33.6	ug/kg	54.2	1	MTM1	08/08/19	1537	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		31200000	20400	60000	ug/kg	96.7	1	TXT1	08/12/19	1805	1899047	3
Antimony	U	ND	989	6000	ug/kg	96.7	1					
Arsenic	J	6380	1500	8990	ug/kg	96.7	1					
Barium		250000	300	1500	ug/kg	96.7	1					
Beryllium		2390	300	1500	ug/kg	96.7	1					
Cadmium	U	ND	300	1500	ug/kg	96.7	1					
Calcium		484000	24000	74900	ug/kg	96.7	1					
Chromium		40000	450	3000	ug/kg	96.7	1					
Cobalt		18900	450	1500	ug/kg	96.7	1					
Copper		29800	899	6000	ug/kg	96.7	1					
Iron		25900000	24000	74900	ug/kg	96.7	1					
Lead		25000	989	6000	ug/kg	96.7	1					
Magnesium		3320000	25500	89900	ug/kg	96.7	1					
Manganese		345000	600	3000	ug/kg	96.7	1					
Nickel		18700	450	1500	ug/kg	96.7	1					
Potassium		1890000	19200	74900	ug/kg	96.7	1					
Selenium	J	1510	1500	8990	ug/kg	96.7	1					
Silver	U	ND	300	1500	ug/kg	96.7	1					
Sodium		119000	21000	74900	ug/kg	96.7	1					
Vanadium		100000	300	1500	ug/kg	96.7	1					
Zinc		73100	1200	6000	ug/kg	96.7	1					
Thallium	U	ND	15000	60000	ug/kg	96.7	10	TXT1	08/12/19	1807	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	6.15	30.8	ug/kg	99.2	2	PRB	08/12/19	0107	1898996	5
Uranium-235	J	27.8	6.15	43.1	ug/kg	99.2	2	PRB	08/12/19	1235	1898996	6
Uranium-238		2840	40.6	123	ug/kg	99.2	2					
Nutrient Analysis												

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-21 Project: WNUC01519
Sample ID: 485262004 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		532	12.9	35.9	mg/kg	46.3	5	KLP1	08/08/19	1257	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	08/08/19	1039	1903812

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-15	Project: WNUC01519
Sample ID: 485262005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 11:20	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 19.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.09	0.399	1.17	mg/kg	9.41	1	LXA2	08/09/19	1914	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	5.46	4.57	13.6	ug/kg	54.6	1	MTM1	08/08/19	1539	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		3510000	8240	24200	ug/kg	97.1	1	TXT1	08/12/19	1809	1899047	3
Antimony	U	ND	400	2420	ug/kg	97.1	1					
Arsenic	U	ND	606	3630	ug/kg	97.1	1					
Barium		15900	121	606	ug/kg	97.1	1					
Beryllium	J	258	121	606	ug/kg	97.1	1					
Cadmium	J	140	121	606	ug/kg	97.1	1					
Calcium		452000	9690	30300	ug/kg	97.1	1					
Chromium		6910	182	1210	ug/kg	97.1	1					
Cobalt		1520	182	606	ug/kg	97.1	1					
Copper		2750	363	2420	ug/kg	97.1	1					
Iron		4630000	9690	30300	ug/kg	97.1	1					
Lead		3740	400	2420	ug/kg	97.1	1					
Magnesium		194000	10300	36300	ug/kg	97.1	1					
Manganese		54800	242	1210	ug/kg	97.1	1					
Nickel		2210	182	606	ug/kg	97.1	1					
Potassium		200000	7750	30300	ug/kg	97.1	1					
Selenium	U	ND	606	3630	ug/kg	97.1	1					
Silver	U	ND	121	606	ug/kg	97.1	1					
Sodium		41400	8480	30300	ug/kg	97.1	1					
Thallium	U	ND	606	2420	ug/kg	97.1	1					
Vanadium		10500	121	606	ug/kg	97.1	1					
Zinc		50800	485	2420	ug/kg	97.1	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.47	12.4	ug/kg	99.0	2	PRB	08/12/19	0108	1898996	4
Uranium-235		51.2	2.47	17.3	ug/kg	99.0	2	PRB	08/12/19	1237	1898996	5
Uranium-238		5790	16.3	49.4	ug/kg	99.0	2					
Nutrient Analysis												

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-15 Project: WNUC01519
Sample ID: 485262005 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		49.0	1.08	3.00	mg/kg	48.1	1	KLP1	08/08/19	1115	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID:	SW-18	Project:	WNUC01519
Sample ID:	485262006	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	16-JUL-19 12:30		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.309	0.033	0.100	mg/L		1	JLD1	08/06/19	0408	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1342	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		721	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1202	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		91.8	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		8150	50.0	200	ug/L	1.00	1					
Chromium	J	1.19	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		1260	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		2140	110	300	ug/L	1.00	1					
Manganese		41.0	2.00	10.0	ug/L	1.00	1					
Nickel		14.8	1.50	5.00	ug/L	1.00	1					
Potassium		2280	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		9550	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	1.84	1.00	5.00	ug/L	1.00	1					
Zinc	J	15.3	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1747	1899001	4
Uranium-238		0.304	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0013	1899001	5
Nutrient Analysis												

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

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-18 Project: WNUC01519
Sample ID: 485262006 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.208	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1151	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-18	Project: WNUC01519
Sample ID: 485262007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 12:30	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 21.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.415	1.22	mg/kg	9.55	1	LXA2	08/09/19	2044	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	4.38	13.1	ug/kg	51.1	1	MTM1	08/08/19	1540	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		401000	8620	25300	ug/kg	99.0	1	TXT1	08/12/19	1814	1899047	3
Antimony	U	ND	418	2530	ug/kg	99.0	1					
Arsenic	U	ND	634	3800	ug/kg	99.0	1					
Barium		4900	127	634	ug/kg	99.0	1					
Beryllium	U	ND	127	634	ug/kg	99.0	1					
Cadmium	U	ND	127	634	ug/kg	99.0	1					
Calcium	J	21700	10100	31700	ug/kg	99.0	1					
Chromium	J	606	190	1270	ug/kg	99.0	1					
Cobalt	U	ND	190	634	ug/kg	99.0	1					
Copper	U	ND	380	2530	ug/kg	99.0	1					
Iron		217000	10100	31700	ug/kg	99.0	1					
Lead	J	476	418	2530	ug/kg	99.0	1					
Magnesium	J	15000	10800	38000	ug/kg	99.0	1					
Manganese		12300	253	1270	ug/kg	99.0	1					
Nickel	J	492	190	634	ug/kg	99.0	1					
Potassium		90700	8110	31700	ug/kg	99.0	1					
Selenium	U	ND	634	3800	ug/kg	99.0	1					
Silver	U	ND	127	634	ug/kg	99.0	1					
Sodium	J	13500	8870	31700	ug/kg	99.0	1					
Thallium	U	ND	634	2530	ug/kg	99.0	1					
Vanadium		1600	127	634	ug/kg	99.0	1					
Zinc	J	1000	507	2530	ug/kg	99.0	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.39	12.0	ug/kg	93.5	2	PRB	08/12/19	0110	1898996	4
Uranium-235	J	5.00	2.39	16.7	ug/kg	93.5	2	PRB	08/12/19	1239	1898996	5
Uranium-238		265	15.8	47.8	ug/kg	93.5	2					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-18 Project: WNUC01519
Sample ID: 485262007 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		3.48	0.758	2.11	mg/kg	32.9	1	KLP1	08/08/19	1116	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID:	SW-20	Project:	WNUC01519
Sample ID:	485262008	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	16-JUL-19 14:00		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.494	0.033	0.100	mg/L		1	JLD1	08/06/19	0437	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1344	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		234	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1204	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		66.3	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		7450	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	J	2.24	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		4710	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1720	110	300	ug/L	1.00	1					
Manganese		642	2.00	10.0	ug/L	1.00	1					
Nickel	J	1.70	1.50	5.00	ug/L	1.00	1					
Potassium		3780	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		4200	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	1.57	1.00	5.00	ug/L	1.00	1					
Zinc	J	7.65	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	J	0.0274	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1759	1899001	4
Uranium-238		1.11	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0023	1899001	5
Nutrient Analysis												

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-20 Project: WNUC01519
Sample ID: 485262008 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.640	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1152	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: SED-20	Project: WNUC01519
Sample ID: 485262009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 14:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 84.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		15.7	2.13	6.28	mg/kg	10.0	1	LXA2	08/09/19	2114	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		121	21.8	65.1	ug/kg	51.8	1	MTM1	08/08/19	1542	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		11000000	39700	117000	ug/kg	92.9	1	TXT1	08/12/19	1820	1899047	3
Antimony	U	ND	1930	11700	ug/kg	92.9	1					
Arsenic	J	4210	2920	17500	ug/kg	92.9	1					
Barium		140000	584	2920	ug/kg	92.9	1					
Beryllium	J	1140	584	2920	ug/kg	92.9	1					
Cadmium	U	ND	584	2920	ug/kg	92.9	1					
Calcium		3550000	46700	146000	ug/kg	92.9	1					
Chromium		13600	875	5840	ug/kg	92.9	1					
Cobalt		6310	875	2920	ug/kg	92.9	1					
Copper		19500	1750	11700	ug/kg	92.9	1					
Iron		10200000	46700	146000	ug/kg	92.9	1					
Lead		25500	1930	11700	ug/kg	92.9	1					
Magnesium		751000	49600	175000	ug/kg	92.9	1					
Manganese		246000	1170	5840	ug/kg	92.9	1					
Nickel		15500	875	2920	ug/kg	92.9	1					
Potassium		664000	37300	146000	ug/kg	92.9	1					
Selenium	U	ND	2920	17500	ug/kg	92.9	1					
Silver	U	ND	584	2920	ug/kg	92.9	1					
Sodium	J	109000	40800	146000	ug/kg	92.9	1					
Thallium	U	ND	2920	11700	ug/kg	92.9	1					
Vanadium		41000	584	2920	ug/kg	92.9	1					
Zinc		63800	2330	11700	ug/kg	92.9	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	J	12.7	11.5	57.6	ug/kg	91.7	2	PRB	08/12/19	0112	1898996	4
Uranium-235		1310	57.6	403	ug/kg	91.7	10	PRB	08/12/19	1240	1898996	5
Uranium-238		49700	380	1150	ug/kg	91.7	10					
Nutrient Analysis												

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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-20 Project: WNUC01519
Sample ID: 485262009 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1600	18.6	51.6	mg/kg	32.9	5	KLP1	08/08/19	1258	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-23	Project: WNUC01519
Sample ID: 485262010	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 16-JUL-19 15:45	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		4.94	0.066	0.200	mg/L		2	JLD1	08/06/19	1731	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1345	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		203	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1206	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		84.4	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		16400	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	J	69.7	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		4800	110	300	ug/L	1.00	1					
Manganese		73.3	2.00	10.0	ug/L	1.00	1					
Nickel	J	1.68	1.50	5.00	ug/L	1.00	1					
Potassium		6320	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		48900	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	1.03	1.00	5.00	ug/L	1.00	1					
Zinc	J	4.54	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1801	1899001	4
Uranium-238	J	0.0673	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0025	1899001	5
Nutrient Analysis												

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-23 Project: WNUC01519
Sample ID: 485262010 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.459	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1153	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-23	Project: WNUC01519
Sample ID: 485262011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 15:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 32.5%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		38.1	0.482	1.42	mg/kg	9.57	1	LXA2	08/09/19	2144	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		40.3	5.55	16.6	ug/kg	55.9	1	MTM1	08/08/19	1544	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		19800000	9770	28700	ug/kg	96.9	1	TXT1	08/12/19	1825	1899047	3
Antimony	U	ND	474	2870	ug/kg	96.9	1					
Arsenic	J	3360	718	4310	ug/kg	96.9	1					
Barium		127000	144	718	ug/kg	96.9	1					
Beryllium		2090	144	718	ug/kg	96.9	1					
Cadmium	J	209	144	718	ug/kg	96.9	1					
Calcium		770000	11500	35900	ug/kg	96.9	1					
Chromium		29300	215	1440	ug/kg	96.9	1					
Cobalt		11800	215	718	ug/kg	96.9	1					
Copper		18500	431	2870	ug/kg	96.9	1					
Iron		29500000	11500	35900	ug/kg	96.9	1					
Lead		14400	474	2870	ug/kg	96.9	1					
Magnesium		2980000	12200	43100	ug/kg	96.9	1					
Manganese		268000	287	1440	ug/kg	96.9	1					
Nickel		11500	215	718	ug/kg	96.9	1					
Potassium		2010000	9190	35900	ug/kg	96.9	1					
Selenium	U	ND	718	4310	ug/kg	96.9	1					
Silver	U	ND	144	718	ug/kg	96.9	1					
Sodium		130000	10100	35900	ug/kg	96.9	1					
Vanadium		70500	144	718	ug/kg	96.9	1					
Zinc		46000	574	2870	ug/kg	96.9	1					
Thallium	U	ND	7180	28700	ug/kg	96.9	10	TXT1	08/12/19	1827	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.88	14.4	ug/kg	97.3	2	PRB	08/12/19	0113	1898996	5
Uranium-235	J	18.3	2.88	20.2	ug/kg	97.3	2	PRB	08/12/19	1242	1898996	6
Uranium-238		2250	19.0	57.7	ug/kg	97.3	2					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-23 Project: WNUC01519
Sample ID: 485262011 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		214	5.75	16.0	mg/kg	43.1	5	KLP1	08/08/19	1302	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-24	Project: WNUC01519
Sample ID: 485262012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 16:15	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 37.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		49.2	0.509	1.50	mg/kg	9.35	1	LXA2	08/09/19	2213	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		25.8	6.14	18.3	ug/kg	57.1	1	MTM1	08/08/19	1549	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		10500000	9980	29400	ug/kg	91.6	1	TXT1	08/12/19	1834	1899047	3
Antimony	U	ND	484	2940	ug/kg	91.6	1					
Arsenic	U	ND	734	4400	ug/kg	91.6	1					
Barium		76800	147	734	ug/kg	91.6	1					
Beryllium		896	147	734	ug/kg	91.6	1					
Cadmium	U	ND	147	734	ug/kg	91.6	1					
Calcium		606000	11700	36700	ug/kg	91.6	1					
Chromium		15200	220	1470	ug/kg	91.6	1					
Cobalt		5000	220	734	ug/kg	91.6	1					
Copper		7790	440	2940	ug/kg	91.6	1					
Iron		10100000	11700	36700	ug/kg	91.6	1					
Lead		8690	484	2940	ug/kg	91.6	1					
Magnesium		1220000	12500	44000	ug/kg	91.6	1					
Manganese		123000	294	1470	ug/kg	91.6	1					
Nickel		5450	220	734	ug/kg	91.6	1					
Potassium		846000	9390	36700	ug/kg	91.6	1					
Selenium	J	885	734	4400	ug/kg	91.6	1					
Silver	U	ND	147	734	ug/kg	91.6	1					
Sodium		94700	10300	36700	ug/kg	91.6	1					
Vanadium		33500	147	734	ug/kg	91.6	1					
Zinc		22800	587	2940	ug/kg	91.6	1					
Thallium	U	ND	7340	29400	ug/kg	91.6	10	TXT1	08/12/19	1836	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	3.17	15.9	ug/kg	99.0	2	PRB	08/12/19	0115	1898996	5
Uranium-235	J	15.9	3.17	22.2	ug/kg	99.0	2	PRB	08/12/19	1244	1898996	6
Uranium-238		1680	20.9	63.5	ug/kg	99.0	2					
Nutrient Analysis												

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Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-24

Project: WNUC01519

Sample ID: 485262012

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		70.5	0.962	2.67	mg/kg	33.3	1	KLP1	08/08/19	1122	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-19	Project: WNUC01519
Sample ID: 485262013	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 08:45	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.154	0.033	0.100	mg/L		1	JLD1	08/06/19	0537	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1347	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		337	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1209	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		67.1	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		4010	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt		5.38	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		3890	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1270	110	300	ug/L	1.00	1					
Manganese		528	2.00	10.0	ug/L	1.00	1					
Nickel	J	3.17	1.50	5.00	ug/L	1.00	1					
Potassium		3010	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		918	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	2.25	1.00	5.00	ug/L	1.00	1					
Zinc	J	8.82	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	J	0.0174	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1803	1899001	4
Uranium-238		0.507	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0026	1899001	5
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-19 Project: WNUC01519
Sample ID: 485262013 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.376	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1153	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 7470A		
3	SW846 3005A/6010D		
4	SW846 3010A/6020B		
5	SW846 3010A/6020B		
6	EPA 350.1		

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-19	Project: WNUC01519
Sample ID: 485262014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 08:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 51.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.51	0.652	1.92	mg/kg	9.28	1	LXA2	08/09/19	2243	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		34.6	7.79	23.2	ug/kg	56.3	1	MTM1	08/08/19	1550	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		3600000	12800	37500	ug/kg	90.9	1	TXT1	08/12/19	1839	1899047	3
Antimony	U	ND	620	3750	ug/kg	90.9	1					
Arsenic	U	ND	939	5630	ug/kg	90.9	1					
Barium		50200	188	939	ug/kg	90.9	1					
Beryllium	J	361	188	939	ug/kg	90.9	1					
Cadmium	U	ND	188	939	ug/kg	90.9	1					
Calcium		375000	15000	46900	ug/kg	90.9	1					
Chromium		5320	282	1880	ug/kg	90.9	1					
Cobalt		3920	282	939	ug/kg	90.9	1					
Copper		5330	563	3750	ug/kg	90.9	1					
Iron		3770000	15000	46900	ug/kg	90.9	1					
Lead		8300	620	3750	ug/kg	90.9	1					
Magnesium		238000	16000	56300	ug/kg	90.9	1					
Manganese		123000	375	1880	ug/kg	90.9	1					
Nickel		8680	282	939	ug/kg	90.9	1					
Potassium		205000	12000	46900	ug/kg	90.9	1					
Selenium	U	ND	939	5630	ug/kg	90.9	1					
Silver	U	ND	188	939	ug/kg	90.9	1					
Sodium	J	19900	13100	46900	ug/kg	90.9	1					
Thallium	U	ND	939	3750	ug/kg	90.9	1					
Vanadium		13300	188	939	ug/kg	90.9	1					
Zinc		32400	751	3750	ug/kg	90.9	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	J	4.27	3.88	19.4	ug/kg	94.0	2	PRB	08/12/19	0117	1898996	4
Uranium-235		451	19.4	136	ug/kg	94.0	10	PRB	08/12/19	1245	1898996	5
Uranium-238		16200	128	388	ug/kg	94.0	10					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-19 Project: WNUC01519
Sample ID: 485262014 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		401	7.49	20.8	mg/kg	40.3	5	KLP1	08/08/19	1303	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-16	Project: WNUC01519
Sample ID: 485262015	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 10:30	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		1.69	0.033	0.100	mg/L		1	JLD1	08/06/19	0607	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1349	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	155	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1211	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		12.3	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		4690	50.0	200	ug/L	1.00	1					
Chromium	J	2.64	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		614	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		326	110	300	ug/L	1.00	1					
Manganese		26.8	2.00	10.0	ug/L	1.00	1					
Nickel	J	3.50	1.50	5.00	ug/L	1.00	1					
Potassium		816	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		1090	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc		44.6	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	J	0.0682	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1804	1899001	4
Uranium-238		1.71	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0028	1899001	5
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-16 Project: WNUC01519
Sample ID: 485262015 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		4.35	0.085	0.250	mg/L	1.00	5	KLP1	07/25/19	1215	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-16	Project:	WNUC01519
Sample ID:	485262016	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	17-JUL-19 10:30		
Receive Date:	18-JUL-19		
Collector:	Client		
Moisture:	21.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		8.73	0.396	1.17	mg/kg	9.20	1	LXA2	08/10/19	0013	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	5.01	14.9	ug/kg	58.9	1	MTM1	08/08/19	1552	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		682000	8350	24600	ug/kg	96.9	1	TXT1	08/12/19	1844	1899047	3
Antimony	J	447	405	2460	ug/kg	96.9	1					
Arsenic	U	ND	614	3690	ug/kg	96.9	1					
Barium		5100	123	614	ug/kg	96.9	1					
Beryllium	U	ND	123	614	ug/kg	96.9	1					
Cadmium	U	ND	123	614	ug/kg	96.9	1					
Calcium		117000	9830	30700	ug/kg	96.9	1					
Chromium		1770	184	1230	ug/kg	96.9	1					
Cobalt	U	ND	184	614	ug/kg	96.9	1					
Copper	J	1000	369	2460	ug/kg	96.9	1					
Iron		1070000	9830	30700	ug/kg	96.9	1					
Lead	J	1260	405	2460	ug/kg	96.9	1					
Magnesium	J	22300	10400	36900	ug/kg	96.9	1					
Manganese		3720	246	1230	ug/kg	96.9	1					
Nickel	J	568	184	614	ug/kg	96.9	1					
Potassium		139000	7860	30700	ug/kg	96.9	1					
Selenium	U	ND	614	3690	ug/kg	96.9	1					
Silver	U	ND	123	614	ug/kg	96.9	1					
Sodium	J	12900	8600	30700	ug/kg	96.9	1					
Thallium	U	ND	614	2460	ug/kg	96.9	1					
Vanadium		2810	123	614	ug/kg	96.9	1					
Zinc		6090	491	2460	ug/kg	96.9	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.40	12.0	ug/kg	94.7	2	PRB	08/12/19	0118	1898996	4
Uranium-235		114	2.40	16.8	ug/kg	94.7	2	PRB	08/12/19	1247	1898996	5
Uranium-238		3310	15.8	48.0	ug/kg	94.7	2					
Nutrient Analysis												

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Certificate of Analysis

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-16 Project: WNUC01519
Sample ID: 485262016 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		13.5	0.935	2.60	mg/kg	41.0	1	KLP1	08/08/19	1124	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID: SW-14	Project: WNUC01519
Sample ID: 485262017	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 11:00	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.234	0.033	0.100	mg/L		1	JLD1	08/06/19	0637	1903827	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1350	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	91.3	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1213	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		66.0	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		6570	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		1180	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1240	110	300	ug/L	1.00	1					
Manganese		275	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium		1620	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		4530	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	13.0	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1806	1899001	4
Uranium-238		0.297	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0030	1899001	5
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-14

Project: WNUC01519

Sample ID: 485262017

Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.233	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1155	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 7470A		
3	SW846 3005A/6010D		
4	SW846 3010A/6020B		
5	SW846 3010A/6020B		
6	EPA 350.1		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-14	Project: WNUC01519
Sample ID: 485262018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 11:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 20.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.412	1.21	mg/kg	9.59	1	LXA2	08/10/19	0043	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	4.26	12.7	ug/kg	50.3	1	MTM1	08/08/19	1554	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		502000	8170	24000	ug/kg	95.1	1	TXT1	08/12/19	1850	1899047	3
Antimony	J	511	397	2400	ug/kg	95.1	1					
Arsenic	U	ND	601	3610	ug/kg	95.1	1					
Barium		5160	120	601	ug/kg	95.1	1					
Beryllium	U	ND	120	601	ug/kg	95.1	1					
Cadmium	U	ND	120	601	ug/kg	95.1	1					
Calcium		142000	9610	30000	ug/kg	95.1	1					
Chromium		1240	180	1200	ug/kg	95.1	1					
Cobalt	J	269	180	601	ug/kg	95.1	1					
Copper	J	386	361	2400	ug/kg	95.1	1					
Iron		581000	9610	30000	ug/kg	95.1	1					
Lead	J	865	397	2400	ug/kg	95.1	1					
Magnesium		91500	10200	36100	ug/kg	95.1	1					
Manganese		15600	240	1200	ug/kg	95.1	1					
Nickel	J	341	180	601	ug/kg	95.1	1					
Potassium		84400	7690	30000	ug/kg	95.1	1					
Selenium	U	ND	601	3610	ug/kg	95.1	1					
Silver	U	ND	120	601	ug/kg	95.1	1					
Sodium	J	18800	8410	30000	ug/kg	95.1	1					
Thallium	U	ND	601	2400	ug/kg	95.1	1					
Vanadium		1740	120	601	ug/kg	95.1	1					
Zinc		5640	481	2400	ug/kg	95.1	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.42	12.1	ug/kg	95.6	2	PRB	08/12/19	0120	1898996	4
Uranium-235	J	5.32	2.42	16.9	ug/kg	95.6	2	PRB	08/12/19	1249	1898996	5
Uranium-238		260	16.0	48.3	ug/kg	95.6	2					
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-14 Project: WNUC01519
Sample ID: 485262018 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		6.43	0.981	2.72	mg/kg	43.1	1	KLP1	08/08/19	1125	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID: SW-13 Project: WNUC01519
Sample ID: 485262019 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.249	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1156	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: SED-13	Project: WNUC01519
Sample ID: 485262020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 12:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 39.7%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.45	0.522	1.54	mg/kg	9.26	1	LXA2	08/10/19	0112	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	15.7	5.78	17.2	ug/kg	52.0	1	MTM1	08/08/19	1555	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		8230000	10200	30000	ug/kg	90.6	1	TXT1	08/12/19	1856	1899047	3
Antimony	U	ND	496	3000	ug/kg	90.6	1					
Arsenic	J	2140	751	4510	ug/kg	90.6	1					
Barium		131000	150	751	ug/kg	90.6	1					
Beryllium		1020	150	751	ug/kg	90.6	1					
Cadmium	U	ND	150	751	ug/kg	90.6	1					
Calcium		620000	12000	37600	ug/kg	90.6	1					
Chromium		18400	225	1500	ug/kg	90.6	1					
Cobalt		11600	225	751	ug/kg	90.6	1					
Copper		8830	451	3000	ug/kg	90.6	1					
Iron		1500000	12000	37600	ug/kg	90.6	1					
Lead		13900	496	3000	ug/kg	90.6	1					
Magnesium		1240000	12800	45100	ug/kg	90.6	1					
Manganese		332000	300	1500	ug/kg	90.6	1					
Nickel		7330	225	751	ug/kg	90.6	1					
Potassium		538000	9620	37600	ug/kg	90.6	1					
Selenium	U	ND	751	4510	ug/kg	90.6	1					
Silver	U	ND	150	751	ug/kg	90.6	1					
Sodium	J	32500	10500	37600	ug/kg	90.6	1					
Vanadium		36500	150	751	ug/kg	90.6	1					
Zinc		33800	601	3000	ug/kg	90.6	1					
Thallium	U	ND	7510	30000	ug/kg	90.6	10	TXT1	08/12/19	1858	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	3.08	15.4	ug/kg	92.9	2	PRB	08/12/19	0125	1898996	5
Uranium-235	J	13.8	3.08	21.6	ug/kg	92.9	2	PRB	08/12/19	1348	1898996	6
Uranium-238		1360	20.3	61.7	ug/kg	92.9	2					
Nutrient Analysis												

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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-13 Project: WNUC01519
Sample ID: 485262020 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		98.5	1.33	3.70	mg/kg	44.6	1	KLP1	08/08/19	1126	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-11 Project: WNUC01519
Sample ID: 485262021 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 17-JUL-19 13:45
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.146	0.033	0.100	mg/L		1	LXA2	08/10/19	0006	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	J	0.081	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1354	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum		634	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1223	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		113	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		3380	50.0	200	ug/L	1.00	1					
Chromium	J	1.47	1.00	10.0	ug/L	1.00	1					
Cobalt	J	3.96	1.00	5.00	ug/L	1.00	1					
Copper	J	3.37	3.00	20.0	ug/L	1.00	1					
Iron		2410	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1030	110	300	ug/L	1.00	1					
Manganese		944	2.00	10.0	ug/L	1.00	1					
Nickel	J	1.82	1.50	5.00	ug/L	1.00	1					
Potassium		1920	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		1980	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	4.62	1.00	5.00	ug/L	1.00	1					
Zinc	J	15.2	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1809	1899001	4
Uranium-238		0.365	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0033	1899001	5
Nutrient Analysis												

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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-11 Project: WNUC01519
Sample ID: 485262021 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.546	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1201	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: SED-11	Project: WNUC01519
Sample ID: 485262022	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 13:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 62.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.35	0.860	2.53	mg/kg	9.52	1	LXA2	08/10/19	0142	1905737	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		62.3	9.27	27.7	ug/kg	52.1	1	MTM1	08/08/19	1557	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		10400000	18000	52900	ug/kg	99.6	1	TXT1	08/12/19	1906	1899047	3
Antimony	U	ND	873	5290	ug/kg	99.6	1					
Arsenic	U	ND	1320	7940	ug/kg	99.6	1					
Barium		126000	265	1320	ug/kg	99.6	1					
Beryllium	J	718	265	1320	ug/kg	99.6	1					
Cadmium	U	ND	265	1320	ug/kg	99.6	1					
Calcium		1110000	21200	66100	ug/kg	99.6	1					
Chromium		9990	397	2650	ug/kg	99.6	1					
Cobalt		4340	397	1320	ug/kg	99.6	1					
Copper		7140	794	5290	ug/kg	99.6	1					
Iron		7610000	21200	66100	ug/kg	99.6	1					
Lead		24000	873	5290	ug/kg	99.6	1					
Magnesium		481000	22500	79400	ug/kg	99.6	1					
Manganese		230000	529	2650	ug/kg	99.6	1					
Nickel		4130	397	1320	ug/kg	99.6	1					
Potassium		300000	16900	66100	ug/kg	99.6	1					
Selenium	J	2380	1320	7940	ug/kg	99.6	1					
Silver	U	ND	265	1320	ug/kg	99.6	1					
Sodium	J	34800	18500	66100	ug/kg	99.6	1					
Thallium	U	ND	1320	5290	ug/kg	99.6	1					
Vanadium		25900	265	1320	ug/kg	99.6	1					
Zinc		38200	1060	5290	ug/kg	99.6	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	5.15	25.7	ug/kg	96.9	2	PRB	08/12/19	0127	1898996	4
Uranium-235	J	11.5	5.15	36.0	ug/kg	96.9	2	PRB	08/12/19	1350	1898996	5
Uranium-238		1320	34.0	103	ug/kg	96.9	2					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-11 Project: WNUC01519
Sample ID: 485262022 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		723	11.7	32.6	mg/kg	49.0	5	KLP1	08/08/19	1304	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/09/19	1419	1905736

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-22	Project:	WNUC01519
Sample ID:	485262023	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	17-JUL-19 14:05		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1815	1899001	1
Uranium-238	J	0.199	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0038	1899001	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3010A/6020B	
2	SW846 3010A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-21	Project:	WNUC01519
Sample ID:	485262024	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	17-JUL-19 14:15		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1816	1899001	1
Uranium-238	J	0.160	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0040	1899001	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3010A/6020B	
2	SW846 3010A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-12 Project: WNUC01519
Sample ID: 485262025 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 17-JUL-19 15:15
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.296	0.033	0.100	mg/L		1	LXA2	08/10/19	0037	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1356	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	118	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1224	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		52.2	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		6540	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	J	1.01	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		1110	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1340	110	300	ug/L	1.00	1					
Manganese		1320	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium		1690	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		4860	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	5.55	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1818	1899001	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0041	1899001	5
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-12 Project: WNUC01519
Sample ID: 485262025 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.228	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1202	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: SED-12	Project: WNUC01519
Sample ID: 485262026	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 15:15	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 62.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.26	0.908	2.67	mg/kg	10.0	1	LXA2	08/12/19	1452	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		56.8	10.4	30.9	ug/kg	57.9	1	MTM1	08/08/19	1559	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		10300000	16800	49300	ug/kg	92.3	1	TXT1	08/12/19	1911	1899047	3
Antimony	U	ND	813	4930	ug/kg	92.3	1					
Arsenic	U	ND	1230	7390	ug/kg	92.3	1					
Barium		118000	246	1230	ug/kg	92.3	1					
Beryllium	J	1130	246	1230	ug/kg	92.3	1					
Cadmium	U	ND	246	1230	ug/kg	92.3	1					
Calcium		1020000	19700	61600	ug/kg	92.3	1					
Chromium		8340	370	2460	ug/kg	92.3	1					
Cobalt		2970	370	1230	ug/kg	92.3	1					
Copper		5390	739	4930	ug/kg	92.3	1					
Iron		4320000	19700	61600	ug/kg	92.3	1					
Lead		28000	813	4930	ug/kg	92.3	1					
Magnesium		279000	20900	73900	ug/kg	92.3	1					
Manganese		150000	493	2460	ug/kg	92.3	1					
Nickel		3510	370	1230	ug/kg	92.3	1					
Potassium		263000	15800	61600	ug/kg	92.3	1					
Selenium	U	ND	1230	7390	ug/kg	92.3	1					
Silver	U	ND	246	1230	ug/kg	92.3	1					
Sodium	J	42000	17200	61600	ug/kg	92.3	1					
Thallium	U	ND	1230	4930	ug/kg	92.3	1					
Vanadium		21600	246	1230	ug/kg	92.3	1					
Zinc		23000	986	4930	ug/kg	92.3	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	5.13	25.6	ug/kg	96.0	2	PRB	08/12/19	0128	1898996	4
Uranium-235	J	16.0	5.13	35.9	ug/kg	96.0	2	PRB	08/12/19	1351	1898996	5
Uranium-238		1700	33.8	103	ug/kg	96.0	2					
Nutrient Analysis												

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-12 Project: WNUC01519
Sample ID: 485262026 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		560	12.0	33.4	mg/kg	50.0	5	KLP1	08/08/19	1305	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-071819 Project: WNUC01519
Sample ID: 485262027 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 18-JUL-19 07:50
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	LXA2	08/10/19	0108	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1401	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1226	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	4.59	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1820	1899001	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0043	1899001	5
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-071819
Sample ID: 485262027

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.0978	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1203	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: EB-02-071819 Project: WNUC01519
Sample ID: 485262028 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 18-JUL-19 08:00
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	LXA2	08/10/19	0139	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1402	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1229	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	4.49	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1821	1899001	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0045	1899001	5
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-02-071819
Sample ID: 485262028

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.101	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1203	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-25	Project: WNUC01519
Sample ID: 485262029	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 09:15	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 89.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		53.3	2.90	8.52	mg/kg	9.22	1	LXA2	08/12/19	1625	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		407	35.9	107	ug/kg	57.9	1	MTM1	08/08/19	1601	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		6570000	60400	178000	ug/kg	96.2	1	TXT1	08/12/19	1916	1899047	3
Antimony	J	5010	2930	17800	ug/kg	96.2	1					
Arsenic	U	ND	4440	26700	ug/kg	96.2	1					
Barium		103000	889	4440	ug/kg	96.2	1					
Beryllium	U	ND	889	4440	ug/kg	96.2	1					
Cadmium	J	2000	889	4440	ug/kg	96.2	1					
Calcium		10500000	71100	222000	ug/kg	96.2	1					
Chromium		35700	1330	8890	ug/kg	96.2	1					
Cobalt		8690	1330	4440	ug/kg	96.2	1					
Copper		418000	2670	17800	ug/kg	96.2	1					
Iron		12300000	71100	222000	ug/kg	96.2	1					
Lead		45900	2930	17800	ug/kg	96.2	1					
Magnesium		1180000	75500	267000	ug/kg	96.2	1					
Manganese		97200	1780	8890	ug/kg	96.2	1					
Nickel		86700	1330	4440	ug/kg	96.2	1					
Potassium		798000	56900	222000	ug/kg	96.2	1					
Selenium	J	4720	4440	26700	ug/kg	96.2	1					
Silver		323000	889	4440	ug/kg	96.2	1					
Sodium		919000	62200	222000	ug/kg	96.2	1					
Thallium	U	ND	4440	17800	ug/kg	96.2	1					
Vanadium		22200	889	4440	ug/kg	96.2	1					
Zinc		9070000	3550	17800	ug/kg	96.2	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234		225	17.9	89.4	ug/kg	96.7	2	PRB	08/12/19	0130	1898996	4
Uranium-238		646000	1180	3580	ug/kg	96.7	20	PRB	08/12/19	1353	1898996	5
Uranium-235		27100	894	6260	ug/kg	96.7	100	PRB	08/12/19	1355	1898996	6
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-25 Project: WNUC01519
Sample ID: 485262029 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		2270	43.3	120	mg/kg	52.1	5	KLP1	08/08/19	1306	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-26	Project: WNUC01519
Sample ID: 485262030	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 09:40	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 26.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.61	0.451	1.33	mg/kg	9.71	1	LXA2	08/12/19	1656	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		576	5.42	16.2	ug/kg	59.2	1	MTM1	08/08/19	1602	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		5540000	8850	26000	ug/kg	95.2	1	TXT1	08/12/19	1921	1899047	3
Antimony	J	1220	430	2600	ug/kg	95.2	1					
Arsenic	J	795	651	3910	ug/kg	95.2	1					
Barium		56000	130	651	ug/kg	95.2	1					
Beryllium	J	253	130	651	ug/kg	95.2	1					
Cadmium	J	610	130	651	ug/kg	95.2	1					
Calcium		3950000	10400	32500	ug/kg	95.2	1					
Chromium		49600	195	1300	ug/kg	95.2	1					
Cobalt		2950	195	651	ug/kg	95.2	1					
Copper		116000	391	2600	ug/kg	95.2	1					
Iron		2840000	10400	32500	ug/kg	95.2	1					
Lead		29300	430	2600	ug/kg	95.2	1					
Magnesium		679000	11100	39100	ug/kg	95.2	1					
Manganese		23000	260	1300	ug/kg	95.2	1					
Nickel		75100	195	651	ug/kg	95.2	1					
Potassium		170000	8330	32500	ug/kg	95.2	1					
Selenium	J	720	651	3910	ug/kg	95.2	1					
Sodium		90400	9110	32500	ug/kg	95.2	1					
Thallium	U	ND	651	2600	ug/kg	95.2	1					
Vanadium		7250	130	651	ug/kg	95.2	1					
Zinc		229000	521	2600	ug/kg	95.2	1					
Silver		544000	1300	6510	ug/kg	95.2	10	TXT1	08/12/19	1923	1899047	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234		129	2.57	12.9	ug/kg	94.2	2	PRB	08/12/19	0132	1898996	5
Uranium-235		14200	257	1800	ug/kg	94.2	200	PRB	08/12/19	1357	1898996	6
Uranium-238		487000	1700	5150	ug/kg	94.2	200					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-26 Project: WNUC01519
Sample ID: 485262030 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		167	4.05	11.2	mg/kg	32.9	5	KLP1	08/08/19	1307	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-27	Project: WNUC01519
Sample ID: 485262031	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 10:30	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 81%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		171	1.74	5.10	mg/kg	9.69	1	LXA2	08/12/19	1727	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		287	20.2	60.2	ug/kg	57.1	1	MTM1	08/08/19	1604	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		1860000	34900	103000	ug/kg	97.5	1	TXT1	08/12/19	1926	1899047	3
Antimony	J	4790	1690	10300	ug/kg	97.5	1					
Arsenic	U	ND	2570	15400	ug/kg	97.5	1					
Barium		723000	514	2570	ug/kg	97.5	1					
Beryllium	U	ND	514	2570	ug/kg	97.5	1					
Cadmium	U	ND	514	2570	ug/kg	97.5	1					
Calcium		253000000	41100	128000	ug/kg	97.5	1					
Chromium		78900	770	5140	ug/kg	97.5	1					
Cobalt	J	2000	770	2570	ug/kg	97.5	1					
Copper		20900	1540	10300	ug/kg	97.5	1					
Iron		4310000	41100	128000	ug/kg	97.5	1					
Lead		18500	1690	10300	ug/kg	97.5	1					
Magnesium		17200000	43700	154000	ug/kg	97.5	1					
Manganese		102000	1030	5140	ug/kg	97.5	1					
Nickel		255000	770	2570	ug/kg	97.5	1					
Potassium		308000	32900	128000	ug/kg	97.5	1					
Selenium	J	2580	2570	15400	ug/kg	97.5	1					
Silver		10500	514	2570	ug/kg	97.5	1					
Sodium		6330000	36000	128000	ug/kg	97.5	1					
Thallium	U	ND	2570	10300	ug/kg	97.5	1					
Vanadium		5710	514	2570	ug/kg	97.5	1					
Zinc		523000	2050	10300	ug/kg	97.5	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	J	38.9	10.2	51.2	ug/kg	97.1	2	PRB	08/12/19	0133	1898996	4
Uranium-238		90900	338	1020	ug/kg	97.1	10	PRB	08/12/19	1402	1898996	5
Uranium-235		3970	102	716	ug/kg	97.1	20	PRB	08/12/19	1403	1898996	6
Nutrient Analysis												

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Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-27 Project: WNUC01519
Sample ID: 485262031 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		395	4.02	11.2	mg/kg	42.4	1	KLP1	08/08/19	1130	1899590	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-28	Project: WNUC01519
Sample ID: 485262032	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 10:50	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 86%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		39.3	2.39	7.02	mg/kg	9.85	1	LXA2	08/12/19	1757	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		526	24.3	72.6	ug/kg	50.9	1	MTM1	08/08/19	1609	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		5790000	44600	131000	ug/kg	91.9	1	TXT1	08/12/19	1936	1899047	3
Antimony	J	6810	2160	13100	ug/kg	91.9	1					
Arsenic	U	ND	3280	19700	ug/kg	91.9	1					
Barium		1220000	655	3280	ug/kg	91.9	1					
Beryllium	U	ND	655	3280	ug/kg	91.9	1					
Cadmium	U	ND	655	3280	ug/kg	91.9	1					
Calcium		284000000	52400	164000	ug/kg	91.9	1					
Chromium		75300	983	6550	ug/kg	91.9	1					
Cobalt	J	2910	983	3280	ug/kg	91.9	1					
Copper		36400	1970	13100	ug/kg	91.9	1					
Iron		29100000	52400	164000	ug/kg	91.9	1					
Lead		91700	2160	13100	ug/kg	91.9	1					
Magnesium		16500000	55700	197000	ug/kg	91.9	1					
Manganese		149000	1310	6550	ug/kg	91.9	1					
Nickel		143000	983	3280	ug/kg	91.9	1					
Potassium		3650000	41900	164000	ug/kg	91.9	1					
Selenium	J	3690	3280	19700	ug/kg	91.9	1					
Silver		27600	655	3280	ug/kg	91.9	1					
Sodium		7260000	45900	164000	ug/kg	91.9	1					
Thallium	U	ND	3280	13100	ug/kg	91.9	1					
Vanadium		5670	655	3280	ug/kg	91.9	1					
Zinc		403000	2620	13100	ug/kg	91.9	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	J	57.2	13.3	66.5	ug/kg	93.3	2	PRB	08/12/19	0135	1898996	4
Uranium-235		6770	133	931	ug/kg	93.3	20	PRB	08/12/19	1405	1898996	5
Uranium-238		161000	878	2660	ug/kg	93.3	20					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-28 Project: WNUC01519
Sample ID: 485262032 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1560	31.5	87.4	mg/kg	49.0	5	KLP1	08/08/19	1308	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID: SW-17 Project: WNUC01519
Sample ID: 485262033 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 18-JUL-19 13:00
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.460	0.033	0.100	mg/L		1	LXA2	08/10/19	0210	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1404	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	144	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1232	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		85.3	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		10000	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		715	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		2280	110	300	ug/L	1.00	1					
Manganese		86.5	2.00	10.0	ug/L	1.00	1					
Nickel		33.4	1.50	5.00	ug/L	1.00	1					
Potassium		2710	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		11300	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	15.6	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1823	1899001	4
Uranium-238		0.246	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0046	1899001	5
Nutrient Analysis												

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-17 Project: WNUC01519
Sample ID: 485262033 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.290	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1204	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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

Client Sample ID: SED-17	Project: WNUC01519
Sample ID: 485262034	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 13:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 15.5%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.908	0.395	1.16	mg/kg	9.83	1	LXA2	08/12/19	1828	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	4.75	14.2	ug/kg	59.9	1	MTM1	08/08/19	1611	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		459000	7840	23100	ug/kg	97.5	1	TXT1	08/12/19	1940	1899047	3
Antimony	J	482	381	2310	ug/kg	97.5	1					
Arsenic	U	ND	577	3460	ug/kg	97.5	1					
Barium		4920	115	577	ug/kg	97.5	1					
Beryllium	U	ND	115	577	ug/kg	97.5	1					
Cadmium	U	ND	115	577	ug/kg	97.5	1					
Calcium		48500	9230	28800	ug/kg	97.5	1					
Chromium	J	1020	173	1150	ug/kg	97.5	1					
Cobalt	J	175	173	577	ug/kg	97.5	1					
Copper	U	ND	346	2310	ug/kg	97.5	1					
Iron		257000	9230	28800	ug/kg	97.5	1					
Lead	J	439	381	2310	ug/kg	97.5	1					
Magnesium		35700	9800	34600	ug/kg	97.5	1					
Manganese		18000	231	1150	ug/kg	97.5	1					
Nickel		773	173	577	ug/kg	97.5	1					
Potassium		87400	7380	28800	ug/kg	97.5	1					
Selenium	U	ND	577	3460	ug/kg	97.5	1					
Silver	U	ND	115	577	ug/kg	97.5	1					
Sodium	J	14100	8070	28800	ug/kg	97.5	1					
Thallium	U	ND	577	2310	ug/kg	97.5	1					
Vanadium		1180	115	577	ug/kg	97.5	1					
Zinc		2420	461	2310	ug/kg	97.5	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.19	11.0	ug/kg	92.6	2	PRB	08/12/19	0137	1898996	4
Uranium-235	J	6.57	2.19	15.3	ug/kg	92.6	2	PRB	08/12/19	1407	1898996	5
Uranium-238		401	14.5	43.8	ug/kg	92.6	2					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-17 Project: WNUC01519
Sample ID: 485262034 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		4.15	0.740	2.05	mg/kg	34.7	1	KLP1	08/08/19	1136	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

Client Sample ID:	DUP-01-071819	Project:	WNUC01519
Sample ID:	485262035	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	18-JUL-19 12:00		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride		0.471	0.033	0.100	mg/L		1	LXA2	08/10/19	0240	1905773	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1406	1904592	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	J	141	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1234	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		81.8	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		9770	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		682	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		2130	110	300	ug/L	1.00	1					
Manganese		82.9	2.00	10.0	ug/L	1.00	1					
Nickel		31.4	1.50	5.00	ug/L	1.00	1					
Potassium		2640	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		11200	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	J	14.7	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1825	1899001	4
Uranium-238		0.229	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0048	1899001	5
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: DUP-01-071819
Sample ID: 485262035

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia		0.290	0.017	0.050	mg/L	1.00	1	KLP1	07/25/19	1205	1899832	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	07/25/19	0952	1899831
SW846 3005A	SW846 3005A for 6010D	SXW1	07/26/19	0522	1899015
SW846 3010A	SW 846 3010 Acid Digestion	SXW1	07/26/19	0607	1899000
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	08/07/19	1414	1904590

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: DUP-01-071819	Project: WNUC01519
Sample ID: 485262036	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 12:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 17.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.814	0.402	1.18	mg/kg	9.71	1	LXA2	08/12/19	2001	1905785	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	4.47	13.3	ug/kg	54.8	1	MTM1	08/08/19	1612	1904595	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		340000	7590	22300	ug/kg	91.7	1	TXT1	08/12/19	1946	1899047	3
Antimony	J	512	368	2230	ug/kg	91.7	1					
Arsenic	U	ND	558	3350	ug/kg	91.7	1					
Barium		4610	112	558	ug/kg	91.7	1					
Beryllium	U	ND	112	558	ug/kg	91.7	1					
Cadmium	U	ND	112	558	ug/kg	91.7	1					
Calcium		32900	8930	27900	ug/kg	91.7	1					
Chromium	J	576	167	1120	ug/kg	91.7	1					
Cobalt	J	326	167	558	ug/kg	91.7	1					
Copper	U	ND	335	2230	ug/kg	91.7	1					
Iron		217000	8930	27900	ug/kg	91.7	1					
Lead	J	420	368	2230	ug/kg	91.7	1					
Magnesium	J	14400	9490	33500	ug/kg	91.7	1					
Manganese		11900	223	1120	ug/kg	91.7	1					
Nickel	J	442	167	558	ug/kg	91.7	1					
Potassium		95400	7140	27900	ug/kg	91.7	1					
Selenium	U	ND	558	3350	ug/kg	91.7	1					
Silver	U	ND	112	558	ug/kg	91.7	1					
Sodium	J	17100	7810	27900	ug/kg	91.7	1					
Thallium	U	ND	558	2230	ug/kg	91.7	1					
Vanadium		1430	112	558	ug/kg	91.7	1					
Zinc	J	1240	447	2230	ug/kg	91.7	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-234	U	ND	2.36	11.8	ug/kg	96.9	2	PRB	08/12/19	0138	1898996	4
Uranium-235	J	2.90	2.36	16.5	ug/kg	96.9	2	PRB	08/12/19	1409	1898996	5
Uranium-238		140	15.6	47.2	ug/kg	96.9	2					
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: DUP-01-071819
Sample ID: 485262036

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		3.66	0.842	2.34	mg/kg	38.5	1	KLP1	08/08/19	1137	1899590	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	08/08/19	0830	1899589
SW846 3050B	ICP-MS 3050BS PREP	HH1	07/30/19	1650	1898995
SW846 3050B	SW846 3050B Prep	SXW1	07/27/19	0814	1899045
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	08/07/19	1610	1904594
SW846 9056A	SW846 9056A Total Anions in Soil	LXA2	08/12/19	1039	1905784

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-22	Project: WNUC01519
Sample ID: 485262002	Client ID: WNUC009
Matrix: Soil	
Collect Date: 15-JUL-19 13:30	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 70%	

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		117	+/-4.47	0.404	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		4.98	+/-1.04	0.305	0.500	pCi/g							
Uranium-238		28.0	+/-2.19	0.329	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-3.44	+/-13.1	23.4	50.0	pCi/g			LXB3	08/04/19	1241	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			68.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-21	Project: WNUC01519
Sample ID: 485262004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 15-JUL-19 16:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 67.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.86	+/-0.504	0.283	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.104	+/-0.165	0.229	0.500	pCi/g							
Uranium-238		1.96	+/-0.518	0.280	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	4.12	+/-10.4	17.9	50.0	pCi/g			LXB3	08/04/19	1257	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-15	Project: WNUC01519
Sample ID: 485262005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 11:20	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 19.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.58	+/-0.549	0.234	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		0.181	+/-0.175	0.109	0.500	pCi/g							
Uranium-238		2.05	+/-0.489	0.206	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	5.62	+/-13.1	22.6	50.0	pCi/g			LXB3	08/04/19	1313	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			92.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-18	Project:	WNUC01519
Sample ID:	485262006	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	16-JUL-19 12:30		
Receive Date:	18-JUL-19		
Collector:	Client		

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.285	+/-0.274	0.380	0.500	pCi/L						
Uranium-235/236	U	0.0501	+/-0.143	0.150	0.500	pCi/L						
Uranium-238	U	0.159	+/-0.203	0.283	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	1.29	+/-27.9	48.4	50.0	pCi/L		JJ3	08/04/19	1017	1899271	2
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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, Liquid "As Received"			46.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			86.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-18	Project: WNUC01519
Sample ID: 485262007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 12:30	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 21.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.219	+/-0.177	0.208	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.0173	+/-0.0963	0.185	0.500	pCi/g							
Uranium-238		0.298	+/-0.193	0.178	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.94	+/-10.2	18.1	50.0	pCi/g			LXB3	08/04/19	1329	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-20	Project:	WNUC01519
Sample ID:	485262008	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	16-JUL-19 14:00		
Receive Date:	18-JUL-19		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Liquid "As Received"													
Pct Uranium-235		2.96				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234		2.35	+/-0.560	0.271	0.500	pCi/L							
Uranium-235/236		0.123	+/-0.163	0.123	0.500	pCi/L							
Uranium-238		0.626	+/-0.301	0.231	0.500	pCi/L							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Liquid "As Received"													
Technetium-99	U	-0.321	+/-26.6	46.2	50.0	pCi/L			JJ3	08/04/19	1039	1899271	2

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, Liquid "As Received"			70.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-20	Project: WNUC01519
Sample ID: 485262009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 14:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 84.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		62.5	+/-2.92	0.335	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		3.12	+/-0.732	0.242	0.500	pCi/g							
Uranium-238		14.9	+/-1.43	0.248	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-8.57	+/-16.7	30.1	50.0	pCi/g			LXB3	08/04/19	1345	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-23	Project:	WNUC01519
Sample ID:	485262010	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	16-JUL-19 15:45		
Receive Date:	18-JUL-19		
Collector:	Client		

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.0557	+/-0.162	0.300	0.500	pCi/L						
Uranium-235/236	U	-0.0558	+/-0.0975	0.295	0.500	pCi/L						
Uranium-238	U	0.103	+/-0.143	0.196	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	13.6	+/-21.6	36.7	50.0	pCi/L		JJ3	08/05/19	0659	1899271	2
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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, Liquid "As Received"			73.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "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	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-23	Project: WNUC01519
Sample ID: 485262011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 15:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 32.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.35	+/-0.561	0.443	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.00261	+/-0.193	0.429	0.500	pCi/g							
Uranium-238		1.69	+/-0.605	0.347	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		50.8	+/-13.6	19.8	50.0	pCi/g			LXB3	08/04/19	1401	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			57.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-24	Project: WNUC01519
Sample ID: 485262012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 16-JUL-19 16:15	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 37.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.14	+/-0.360	0.192	0.500	pCi/g			MP2	08/02/19	1020	1898800	1
Uranium-235/236	U	0.0608	+/-0.120	0.166	0.500	pCi/g							
Uranium-238		0.944	+/-0.325	0.134	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		35.8	+/-15.4	24.0	50.0	pCi/g			LXB3	08/04/19	1418	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-19	Project: WNUC01519
Sample ID: 485262013	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 08:45	
Receive Date: 18-JUL-19	
Collector: Client	

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234		0.587	+/-0.255	0.219	0.500	pCi/L							
Uranium-235/236	U	0.0192	+/-0.0884	0.159	0.500	pCi/L							
Uranium-238	U	0.168	+/-0.147	0.170	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-0.621	+/-24.7	43.0	50.0	pCi/L			JJ3	08/04/19	1123	1899271	2
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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, Liquid "As Received"			87.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-19	Project: WNUC01519
Sample ID: 485262014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 08:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 51.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		32.5	+/-1.75	0.234	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		2.30	+/-0.521	0.0908	0.500	pCi/g							
Uranium-238		8.18	+/-0.881	0.190	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	6.28	+/-15.7	27.0	50.0	pCi/g			LXB3	08/04/19	1434	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			110	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-16	Project:	WNUC01519
Sample ID:	485262015	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	17-JUL-19 10:30		
Receive Date:	18-JUL-19		
Collector:	Client		

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235		3.07				percent		MP2	07/24/19	2142	1898796	1
Uranium-233/234		3.34	+/-0.557	0.202	0.500	pCi/L						
Uranium-235/236		0.145	+/-0.141	0.087	0.500	pCi/L						
Uranium-238		0.710	+/-0.262	0.147	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-3.1	+/-24.1	42.0	50.0	pCi/L		JJ3	08/04/19	1145	1899271	2
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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, Liquid "As Received"			78.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-16	Project: WNUC01519
Sample ID: 485262016	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 10:30	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 21.1%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		14.9	+/-1.32	0.231	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		0.678	+/-0.322	0.113	0.500	pCi/g							
Uranium-238		2.77	+/-0.573	0.146	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	4.94	+/-11.4	19.6	50.0	pCi/g			LXB3	08/04/19	1450	1898807	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			93.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-14	Project: WNUC01519
Sample ID: 485262017	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 11:00	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Liquid "As Received"													
Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234		0.575	+/-0.280	0.220	0.500	pCi/L							
Uranium-235/236	U	0.101	+/-0.155	0.203	0.500	pCi/L							
Uranium-238	U	0.0793	+/-0.144	0.236	0.500	pCi/L							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Liquid "As Received"													
Technetium-99	U	3.73	+/-24.3	41.9	50.0	pCi/L			JJ3	08/04/19	1208	1899271	2

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, Liquid "As Received"			74.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96	(15%-125%)

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-14	Project: WNUC01519
Sample ID: 485262018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 11:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 20.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.42	+/-0.478	0.283	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.025	+/-0.139	0.266	0.500	pCi/g							
Uranium-238		0.389	+/-0.254	0.117	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0243	+/-12.0	21.1	50.0	pCi/g			LXB3	08/04/19	1506	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			77.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-13	Project: WNUC01519
Sample ID: 485262019	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 12:00	
Receive Date: 18-JUL-19	
Collector: Client	

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.0159	+/-0.133	0.275	0.500	pCi/L							
Uranium-235/236	U	0.00	+/-0.0812	0.117	0.500	pCi/L							
Uranium-238	U	-0.0139	+/-0.101	0.240	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-6.9	+/-24.4	42.8	50.0	pCi/L			JJ3	08/04/19	1230	1899271	2
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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, Liquid "As Received"			72.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-13	Project: WNUC01519
Sample ID: 485262020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 12:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 39.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.67	+/-0.450	0.252	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.156	+/-0.179	0.223	0.500	pCi/g							
Uranium-238		1.33	+/-0.393	0.0886	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.04	+/-13.2	23.3	50.0	pCi/g			LXB3	08/04/19	1522	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SW-11	Project:	WNUC01519
Sample ID:	485262021	Client ID:	WNUC009
Matrix:	Surface Water		
Collect Date:	17-JUL-19 13:45		
Receive Date:	18-JUL-19		
Collector:	Client		

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1	
Uranium-233/234		0.296	+/-0.221	0.271	0.500	pCi/L							
Uranium-235/236	U	0.0959	+/-0.147	0.193	0.500	pCi/L							
Uranium-238	U	0.105	+/-0.148	0.223	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-1.83	+/-26.1	45.4	50.0	pCi/L		JJ3	08/04/19	1252	1899271	2
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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, Liquid "As Received"			66.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-11	Project: WNUC01519
Sample ID: 485262022	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 13:45	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 62.4%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		1.14	+/-0.390	0.231	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.00159	+/-0.118	0.262	0.500	pCi/g							
Uranium-238		0.742	+/-0.317	0.212	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-1.84	+/-17.1	30.2	50.0	pCi/g			LXB3	08/04/19	1538	1898807	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			92.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-22	Project: WNUC01519
Sample ID: 485262023	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 14:05	
Receive Date: 18-JUL-19	
Collector: Client	

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.187	+/-0.197	0.281	0.500	pCi/L							
Uranium-235/236	U	0.00	+/-0.0787	0.113	0.500	pCi/L							
Uranium-238	U	0.0611	+/-0.106	0.0917	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-9.94	+/-23.7	41.8	50.0	pCi/L			JJ3	08/04/19	1314	1899271	2
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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, Liquid "As Received"			64.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-21 Project: WNUC01519
Sample ID: 485262024 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 17-JUL-19 14:15
Receive Date: 18-JUL-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Alpha Spec Analysis												
Alphaspec U, Liquid "As Received"												
Pct Uranium-235	U	0.00				percent		MP2		07/24/19	2142 1898796	1
Uranium-233/234	U	0.0905	+/-0.222	0.404	0.500	pCi/L						
Uranium-235/236	U	0.0804	+/-0.174	0.260	0.500	pCi/L						
Uranium-238	U	0.0508	+/-0.143	0.248	0.500	pCi/L						
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Liquid "As Received"												
Technetium-99	U	-13	+/-24.5	43.3	50.0	pCi/L		JJ3		08/04/19	1337 1899271	2

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, Liquid "As Received"			51.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-12	Project: WNUC01519
Sample ID: 485262025	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 17-JUL-19 15:15	
Receive Date: 18-JUL-19	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Liquid "As Received"													
Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.0491	+/-0.148	0.277	0.500	pCi/L							
Uranium-235/236	U	0.00914	+/-0.0989	0.204	0.500	pCi/L							
Uranium-238	U	0.101	+/-0.146	0.228	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-3.49	+/-25.6	44.6	50.0	pCi/L			JJ3	08/04/19	1359	1899271	2
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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, Liquid "As Received"			75.4	(15%-125%)
Technetium-99m Tracer		Liquid Scint Tc99, Liquid "As Received"			91.2	(15%-125%)

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-12	Project: WNUC01519
Sample ID: 485262026	Client ID: WNUC009
Matrix: Soil	
Collect Date: 17-JUL-19 15:15	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 62.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		0.925	+/-0.368	0.284	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.0647	+/-0.171	0.307	0.500	pCi/g							
Uranium-238		1.17	+/-0.402	0.235	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.55	+/-14.4	25.4	50.0	pCi/g			LXB3	08/04/19	1555	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			91.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-071819 Project: WNUC01519
Sample ID: 485262027 Client ID: WNUC009
Matrix: Surface Water
Collect Date: 18-JUL-19 07:50
Receive Date: 18-JUL-19
Collector: Client

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	-0.0792	+/-0.103	0.302	0.500	pCi/L						
Uranium-235/236	U	0.0313	+/-0.162	0.322	0.500	pCi/L						
Uranium-238	U	-0.0326	+/-0.0729	0.211	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-27.4	+/-26.1	47.1	50.0	pCi/L		JJ3	08/04/19	1421	1899271	2
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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, Liquid "As Received"			69.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			88	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-02-071819
Sample ID: 485262028
Matrix: Surface Water
Collect Date: 18-JUL-19 08:00
Receive Date: 18-JUL-19
Collector: Client

Project: WNUC01519
Client ID: WNUC009

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1	
Uranium-233/234	U	0.094	+/-0.126	0.198	0.500	pCi/L							
Uranium-235/236	U	0.0578	+/-0.104	0.159	0.500	pCi/L							
Uranium-238	U	0.0361	+/-0.109	0.203	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-7.06	+/-23.6	41.4	50.0	pCi/L		JJ3	08/04/19	1443	1899271	2
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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, Liquid "As Received"			86.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-25 Project: WNUC01519
Sample ID: 485262029 Client ID: WNUC009
Matrix: Soil
Collect Date: 18-JUL-19 09:15
Receive Date: 18-JUL-19
Collector: Client
Moisture: 89.2%

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		907	+/-17.9	0.715	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236		41.1	+/-4.24	0.340	0.500	pCi/g							
Uranium-238		149	+/-7.25	0.768	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	8.55	+/-17.9	30.8	50.0	pCi/g			LXB3	08/04/19	1611	1898807	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-26	Project: WNUC01519
Sample ID: 485262030	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 09:40	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 26.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		222	+/-6.24	0.424	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236		11.0	+/-1.55	0.270	0.500	pCi/g							
Uranium-238		46.9	+/-2.87	0.368	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	1.68	+/-15.3	26.7	50.0	pCi/g			LXB3	08/04/19	1627	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-27 Project: WNUC01519
Sample ID: 485262031 Client ID: WNUC009
Matrix: Soil
Collect Date: 18-JUL-19 10:30
Receive Date: 18-JUL-19
Collector: Client
Moisture: 81%

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		225	+/-3.73	0.183	0.500	pCi/g			MP2	08/01/19	1303	1898804	1
Uranium-235/236		11.9	+/-0.955	0.159	0.500	pCi/g							
Uranium-238		37.4	+/-1.52	0.0483	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-10.7	+/-21.6	38.6	50.0	pCi/g			LXB3	08/04/19	1749	1898805	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0947	1898481

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			76	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-28	Project: WNUC01519
Sample ID: 485262032	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 10:50	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 86%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		254	+/-4.06	0.152	0.500	pCi/g			MP2	08/01/19	1303	1898804	1
Uranium-235/236		12.4	+/-0.999	0.182	0.500	pCi/g							
Uranium-238		44.6	+/-1.70	0.148	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	5.75	+/-21.8	37.7	50.0	pCi/g			LXB3	08/04/19	1805	1898805	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0947	1898481

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			80.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SW-17	Project: WNUC01519
Sample ID: 485262033	Client ID: WNUC009
Matrix: Surface Water	
Collect Date: 18-JUL-19 13:00	
Receive Date: 18-JUL-19	
Collector: Client	

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142 1898796	1
Uranium-233/234	U	0.145	+/-0.218	0.362	0.500	pCi/L						
Uranium-235/236	U	-0.0293	+/-0.094	0.255	0.500	pCi/L						
Uranium-238	U	0.150	+/-0.179	0.250	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-8.19	+/-25.5	44.7	50.0	pCi/L			JJ3	08/04/19	1506 1899271	2
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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, Liquid "As Received"			57	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-17	Project: WNUC01519
Sample ID: 485262034	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 13:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 15.5%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		0.658	+/-0.349	0.370	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236	U	0.0235	+/-0.130	0.250	0.500	pCi/g							
Uranium-238		0.302	+/-0.229	0.223	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	7.50	+/-14.9	25.5	50.0	pCi/g			LXB3	08/04/19	1643	1898807	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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"			93.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.2	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: DUP-01-071819
Sample ID: 485262035
Matrix: Surface Water
Collect Date: 18-JUL-19 12:00
Receive Date: 18-JUL-19
Collector: Client

Project: WNUC01519
Client ID: WNUC009

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796	1	
Uranium-233/234	U	0.204	+/-0.220	0.310	0.500	pCi/L							
Uranium-235/236	U	0.00	+/-0.0931	0.134	0.500	pCi/L							
Uranium-238	U	0.0925	+/-0.168	0.275	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-1.49	+/-25.7	44.6	50.0	pCi/L		JJ3	08/04/19	1528	1899271	2
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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, Liquid "As Received"			54.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: DUP-01-071819	Project: WNUC01519
Sample ID: 485262036	Client ID: WNUC009
Matrix: Soil	
Collect Date: 18-JUL-19 12:00	
Receive Date: 18-JUL-19	
Collector: Client	
Moisture: 17.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.07	+/-0.410	0.285	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236	U	0.104	+/-0.184	0.278	0.500	pCi/g							
Uranium-238		0.354	+/-0.267	0.320	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-10.6	+/-14.9	27.2	50.0	pCi/g			LXB3	08/04/19	1659	1898807	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	07/23/19	0950	1898477

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

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QC Summary

Report Date: September 26, 2019

Page 1 of 22

Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 485262

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1903814										
QC1204349313	485262002	DUP									
Fluoride		4.64		6.12	mg/kg	27.5 ^		(+/-3.20)	LXA2	08/08/19	21:50
QC1204349312	LCS										
Fluoride	24.0			25.4	mg/kg		106	(90%-110%)		08/08/19	20:48
QC1204349311	MB										
Fluoride			U	ND	mg/kg					08/08/19	20:17
QC1204349315	485262002	MS									
Fluoride	81.7	4.64		35.4	mg/kg		37.6*	(75%-125%)		08/08/19	22:21
Batch	1903827										
QC1204349352	486599001	DUP									
Fluoride		J	0.637	U	ND	mg/L	200 ^		JLD1	08/06/19	07:37
QC1204349351	LCS										
Fluoride	2.50			2.29	mg/L		91.7	(90%-110%)		08/06/19	01:38
QC1204349350	MB										
Fluoride			U	ND	mg/L					08/06/19	01:08
QC1204349353	486599001	PS									
Fluoride	2.50	J	0.0637	2.41	mg/L		93.8	(90%-110%)		08/06/19	08:07
Batch	1905737										
QC1204353692	485262005	DUP									
Fluoride			2.09	2.05	mg/kg	2 ^		(+/-1.19)	LXA2	08/09/19	19:44
QC1204353691	LCS										
Fluoride	24.7			24.3	mg/kg		98.4	(90%-110%)		08/09/19	18:45

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QC Summary

Workorder: 485262

Page 2 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1905737										
QC1204353690		MB									
Fluoride			U	ND	mg/kg				LXA2	08/09/19	18:15
QC1204353693	485262005	MS									
Fluoride	31.0	2.09		24.7	mg/kg		72.9*	(75%-125%)		08/09/19	20:14
Batch	1905773										
QC1204353790	485262019	DUP									
Fluoride		0.226		0.220	mg/L	2.6 ^		(+/-0.100)	LXA2	08/09/19	22:03
QC1204353789	LCS										
Fluoride	2.50			2.53	mg/L		101	(90%-110%)		08/09/19	20:30
QC1204353788	MB										
Fluoride			U	ND	mg/L					08/09/19	19:59
QC1204353791	485262019	PS									
Fluoride	2.50	0.226		2.71	mg/L		99.2	(90%-110%)		08/09/19	22:34
Batch	1905785										
QC1204353777	485262026	DUP									
Fluoride	J	2.26	J	2.38	mg/kg	5.03 ^		(+/-2.63)	LXA2	08/12/19	15:23
QC1204353776	LCS										
Fluoride	24.2			25.4	mg/kg		105	(90%-110%)		08/12/19	14:21
QC1204353775	MB										
Fluoride			U	ND	mg/kg					08/12/19	13:51
QC1204353779	485262026	MS									
Fluoride	64.0	J	2.26	17.5	mg/kg		23.9*	(75%-125%)		08/12/19	15:54

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QC Summary

Workorder: 485262

Page 3 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1898996										
QC1204337698		LCS									
Uranium-235	35.6			33.6	ug/kg		94.4	(80%-120%)	PRB	08/12/19	12:22
Uranium-238	4910			4710	ug/kg		96.1	(80%-120%)			
QC1204337703		LCS									
Uranium-234	52.3			61.6	ug/kg		118	(80%-120%)		08/12/19	00:55
QC1204337697		MB									
Uranium-234			U	ND	ug/kg					08/12/19	00:53
Uranium-235			U	ND	ug/kg					08/12/19	12:20
Uranium-238			U	ND	ug/kg						
QC1204337699		485262002	MS								
Uranium-235	112	2230		2190	ug/kg		N/A	(75%-125%)		08/12/19	12:25
Uranium-238	15400	80700		90600	ug/kg		N/A	(75%-125%)			
QC1204337704		485262002	MS								
Uranium-234	167	J	22.0	227	ug/kg		123	(75%-125%)		08/12/19	00:58
QC1204337700		485262002	MSD								
Uranium-235	110	2230		2220	ug/kg	1.25	N/A	(0%-20%)		08/12/19	12:27
Uranium-238	15200	80700		88700	ug/kg	2.16	N/A	(0%-20%)			
QC1204343458		485262002	MSD								
Uranium-234	168	J	22.0	227	ug/kg	0.279	123	(0%-20%)		08/12/19	01:00
QC1204337701		485262002	SDILT								
Uranium-234		J	0.033	U	ND	ug/L	N/A	(0%-20%)		08/12/19	01:02

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QC Summary

Workorder: 485262

Page 4 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1898996										
Uranium-235		0.671		0.125	ug/L	6.87		(0%-20%)	PRB	08/12/19	12:30
Uranium-238		24.3		4.78	ug/L	1.54		(0%-20%)			
Batch	1899001										
QC1204337716	485262006 DUP										
Uranium-234	U	ND	U	ND	ug/L	N/A			PRB	08/12/19	00:14
Uranium-235	U	ND	U	ND	ug/L	N/A				08/11/19	17:49
Uranium-238		0.304		0.250	ug/L	19.4 ^		(+/-0.200)			
QC1204337714	LCS										
Uranium-235		0.360		0.353	ug/L		98.2	(80%-120%)		08/11/19	17:45
Uranium-238		49.6		48.1	ug/L		97	(80%-120%)			
QC1204337715	LCS										
Uranium-234		0.550		0.622	ug/L		113	(80%-120%)		08/12/19	00:11
QC1204337713	MB										
Uranium-234			U	ND	ug/L					08/12/19	00:09
Uranium-235			U	ND	ug/L					08/11/19	17:44
Uranium-238			U	ND	ug/L						
QC1204337717	485262006 MS										
Uranium-235	0.360 U	ND		0.363	ug/L		99.2	(75%-125%)		08/11/19	17:51
Uranium-238	49.6	0.304		48.9	ug/L		97.8	(75%-125%)			

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QC Summary

Workorder: 485262

Page 5 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch 1899001											
QC1204337718	485262006	MS									
Uranium-234	0.550	U	ND	0.660	ug/L		120	(75%-125%)	PRB	08/12/19	00:16
QC1204337719 485262006 SDILT											
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		08/12/19	00:18
Uranium-235		U	ND	U	ND	ug/L	N/A	(0%-20%)		08/11/19	17:54
Uranium-238			0.304	J	0.0917	ug/L	50.8	(0%-20%)			
Metals Analysis-ICP											
Batch 1899016											
QC1204337752	LCS										
Aluminum	5000			4860	ug/L		97.2	(80%-120%)	TXT1	08/01/19	11:42
Antimony	500			471	ug/L		94.1	(80%-120%)			
Arsenic	500			469	ug/L		93.9	(80%-120%)			
Barium	500			485	ug/L		97	(80%-120%)			
Beryllium	500			482	ug/L		96.4	(80%-120%)			
Cadmium	500			483	ug/L		96.7	(80%-120%)			
Calcium	5000			4910	ug/L		98.2	(80%-120%)			
Chromium	500			482	ug/L		96.5	(80%-120%)			
Cobalt	500			488	ug/L		97.6	(80%-120%)			
Copper	500			478	ug/L		95.5	(80%-120%)			

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QC Summary

Workorder: 485262

Page 6 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Iron	5000			4860	ug/L		97.2	(80%-120%)	TXT1	08/01/19	11:42
Lead	500			479	ug/L		95.8	(80%-120%)			
Magnesium	5000			4940	ug/L		98.7	(80%-120%)			
Manganese	500			483	ug/L		96.5	(80%-120%)			
Nickel	500			486	ug/L		97.2	(80%-120%)			
Potassium	5000			4740	ug/L		94.9	(80%-120%)			
Selenium	500			456	ug/L		91.2	(80%-120%)			
Silver	100			97.1	ug/L		97.1	(80%-120%)			
Sodium	5000			4700	ug/L		94	(80%-120%)			
Thallium	500			478	ug/L		95.5	(80%-120%)			
Vanadium	500			484	ug/L		96.9	(80%-120%)			
Zinc	500			477	ug/L		95.5	(80%-120%)			
QC1204337751 MB											
Aluminum			U	ND	ug/L					08/01/19	11:39
Antimony			U	ND	ug/L						
Arsenic			U	ND	ug/L						

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QC Summary

Workorder: 485262

Page 7 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Barium			U	ND	ug/L				TXT1	08/01/19	11:39
Beryllium			U	ND	ug/L						
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium			U	ND	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						
Manganese			U	ND	ug/L						
Nickel			U	ND	ug/L						
Potassium			U	ND	ug/L						
Selenium			U	ND	ug/L						
Silver			U	ND	ug/L						

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QC Summary

Workorder: 485262

Page 8 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Sodium			U	ND	ug/L				TXT1	08/01/19	11:39
Thallium			U	ND	ug/L						
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204337753 485262001 MS											
Aluminum	5000	J	102	4940	ug/L		96.7	(75%-125%)		08/01/19	11:46
Antimony	500	U	ND	464	ug/L		92.7	(75%-125%)			
Arsenic	500	U	ND	466	ug/L		92.8	(75%-125%)			
Barium	500		34.5	512	ug/L		95.6	(75%-125%)			
Beryllium	500	U	ND	475	ug/L		94.9	(75%-125%)			
Cadmium	500	U	ND	475	ug/L		95	(75%-125%)			
Calcium	5000		3760	8640	ug/L		97.5	(75%-125%)			
Chromium	500	U	ND	477	ug/L		95.2	(75%-125%)			
Cobalt	500	U	ND	482	ug/L		96.3	(75%-125%)			
Copper	500	U	ND	479	ug/L		95.8	(75%-125%)			
Iron	5000		844	5660	ug/L		96.4	(75%-125%)			

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QC Summary

Workorder: 485262

Page 9 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Lead	500	U	ND	473	ug/L		94.6	(75%-125%)	TXT1	08/01/19	11:46
Magnesium	5000		1110	5950	ug/L		96.9	(75%-125%)			
Manganese	500		189	666	ug/L		95.3	(75%-125%)			
Nickel	500	J	1.83	481	ug/L		95.8	(75%-125%)			
Potassium	5000		1420	6110	ug/L		93.8	(75%-125%)			
Selenium	500	U	ND	454	ug/L		90.8	(75%-125%)			
Silver	100	U	ND	95.5	ug/L		95.5	(75%-125%)			
Sodium	5000		3810	8440	ug/L		92.5	(75%-125%)			
Thallium	500	U	ND	469	ug/L		93.8	(75%-125%)			
Vanadium	500	U	ND	479	ug/L		95.8	(75%-125%)			
Zinc	500	J	6.12	475	ug/L		93.8	(75%-125%)			
QC1204337754 485262001 MSD											
Aluminum	5000	J	102	4860	ug/L	1.58	95.2	(0%-20%)		08/01/19	11:48
Antimony	500	U	ND	450	ug/L	3.1	89.9	(0%-20%)			
Arsenic	500	U	ND	442	ug/L	5.32	87.9	(0%-20%)			
Barium	500		34.5	495	ug/L	3.53	92	(0%-20%)			

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QC Summary

Workorder: 485262

Page 10 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Beryllium	500	U	ND	453	ug/L	4.62	90.7	(0%-20%)	TXT1	08/01/19	11:48
Cadmium	500	U	ND	463	ug/L	2.61	92.6	(0%-20%)			
Calcium	5000		3760	8320	ug/L	3.78	91.1	(0%-20%)			
Chromium	500	U	ND	461	ug/L	3.28	92.1	(0%-20%)			
Cobalt	500	U	ND	465	ug/L	3.47	93	(0%-20%)			
Copper	500	U	ND	464	ug/L	3.2	92.8	(0%-20%)			
Iron	5000		844	5500	ug/L	2.88	93.1	(0%-20%)			
Lead	500	U	ND	456	ug/L	3.74	91.2	(0%-20%)			
Magnesium	5000		1110	5720	ug/L	4.09	92.1	(0%-20%)			
Manganese	500		189	645	ug/L	3.15	91.2	(0%-20%)			
Nickel	500	J	1.83	466	ug/L	3.11	92.8	(0%-20%)			
Potassium	5000		1420	6030	ug/L	1.43	92	(0%-20%)			
Selenium	500	U	ND	440	ug/L	3.13	88	(0%-20%)			
Silver	100	U	ND	94.4	ug/L	1.2	94.3	(0%-20%)			
Sodium	5000		3810	8240	ug/L	2.35	88.5	(0%-20%)			

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

QC Summary

Workorder: 485262

Page 11 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Thallium	500	U	ND	460	ug/L	1.87	92.1	(0%-20%)	TXT1	08/01/19	11:48
Vanadium	500	U	ND	465	ug/L	3.14	92.9	(0%-20%)			
Zinc	500	J	6.12	460	ug/L	3.17	90.8	(0%-20%)			
QC1204337755 485262001 SDILT											
Aluminum		J	102	U	ND	ug/L	N/A	(0%-20%)		08/01/19	11:52
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			34.5		7.03	ug/L	1.78	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			3760		774	ug/L	2.83	(0%-20%)			
Chromium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Cobalt		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Copper		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Iron			844		173	ug/L	2.5	(0%-20%)			
Lead		U	ND	U	ND	ug/L	N/A	(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 12 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899016										
Magnesium		1110	J	233	ug/L	5.1		(0%-20%)	TXT1	08/01/19	11:52
Manganese		189		38.8	ug/L	2.65		(0%-20%)			
Nickel	J	1.83	U	ND	ug/L	N/A		(0%-20%)			
Potassium		1420		334	ug/L	17.2		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		3810		802	ug/L	5.13		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	J	6.12	U	ND	ug/L	N/A		(0%-20%)			
<hr/>											
Batch	1899047										
	QC1204337823 LCS										
Aluminum	466000			411000	ug/kg		88.2	(80%-120%)	TXT1	08/12/19	17:29
Antimony	46600			41200	ug/kg		88.6	(80%-120%)			
Arsenic	46600			41600	ug/kg		89.3	(80%-120%)			
Barium	46600			42600	ug/kg		91.4	(80%-120%)			
Beryllium	46600			44700	ug/kg		95.9	(80%-120%)			

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

QC Summary

Workorder: 485262

Page 13 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Cadmium	46600			41400	ug/kg		89	(80%-120%)	TXT1	08/12/19	17:29
Calcium	466000			412000	ug/kg		88.4	(80%-120%)			
Chromium	46600			42100	ug/kg		90.5	(80%-120%)			
Cobalt	46600			41900	ug/kg		90	(80%-120%)			
Copper	46600			43900	ug/kg		94.4	(80%-120%)			
Iron	466000			404000	ug/kg		86.9	(80%-120%)			
Lead	46600			41400	ug/kg		89	(80%-120%)			
Magnesium	466000			411000	ug/kg		88.3	(80%-120%)			
Manganese	46600			42100	ug/kg		90.3	(80%-120%)			
Nickel	46600			41700	ug/kg		89.5	(80%-120%)			
Potassium	466000			426000	ug/kg		91.5	(80%-120%)			
Selenium	46600			39700	ug/kg		85.2	(80%-120%)			
Silver	9310			8580	ug/kg		92.2	(80%-120%)			
Sodium	466000			412000	ug/kg		88.5	(80%-120%)			
Thallium	46600			41200	ug/kg		88.5	(80%-120%)			

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

QC Summary

Workorder: 485262

Page 14 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Vanadium	46600			42800	ug/kg		91.9	(80%-120%)	TXT1	08/12/19	17:29
Zinc	46600			41300	ug/kg		88.6	(80%-120%)			
QC1204337822	MB										
Aluminum			U	ND	ug/kg					08/12/19	17:26
Antimony			J	319	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg						
Chromium			J	160	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						

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

QC Summary

Workorder: 485262

Page 15 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Manganese			U	ND	ug/kg				TXT1	08/12/19	17:26
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Sodium			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204337824 485262002 MS											
Aluminum	1630000	25800000		41200000	ug/kg		N/A	(75%-125%)		08/12/19	17:38
Antimony	163000	U	ND	123000	ug/kg		75.2	(75%-125%)			
Arsenic	163000	J	4620	139000	ug/kg		82.9	(75%-125%)			
Barium	163000		209000	343000	ug/kg		82.5	(75%-125%)			
Beryllium	163000		2020	146000	ug/kg		88.5	(75%-125%)			
Cadmium	163000	J	374	135000	ug/kg		82.6	(75%-125%)			

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

QC Summary

Workorder: 485262

Page 16 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Calcium	1630000	872000		2180000	ug/kg		80.4	(75%-125%)	TXT1	08/12/19	17:38
Chromium	163000	35100		171000	ug/kg		83.4	(75%-125%)			
Cobalt	163000	16600		152000	ug/kg		83.4	(75%-125%)			
Copper	163000	33100		185000	ug/kg		93.7	(75%-125%)			
Iron	1630000	32500000		34900000	ug/kg		N/A	(75%-125%)			
Lead	163000	37400		174000	ug/kg		84.2	(75%-125%)			
Magnesium	1630000	2180000		3580000	ug/kg		86.1	(75%-125%)			
Manganese	163000	389000		498000	ug/kg		67.2 *	(75%-125%)			
Nickel	163000	43300		177000	ug/kg		82.2	(75%-125%)			
Potassium	1630000	1410000		2990000	ug/kg		97.5	(75%-125%)			
Selenium	163000	J 3290		134000	ug/kg		80.6	(75%-125%)			
Silver	32500	U ND		27800	ug/kg		85.6	(75%-125%)			
Sodium	1630000	J 69700		1460000	ug/kg		85.7	(75%-125%)			
Thallium	163000	U ND		145000	ug/kg		88.7	(75%-125%)		08/12/19	17:50
Vanadium	163000	73700		209000	ug/kg		83.3	(75%-125%)		08/12/19	17:38

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 17 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Zinc	163000	138000		279000	ug/kg		86.9	(75%-125%)	TXT1	08/12/19	17:38
QC1204337825 485262002 MSD											
Aluminum	1590000	25800000		55600000	ug/kg	29.7*	N/A	(0%-20%)		08/12/19	17:41
Antimony	159000	U	ND	119000	ug/kg	3.09	74.6*	(0%-20%)			
Arsenic	159000	J	4620	138000	ug/kg	0.75	84.2	(0%-20%)			
Barium	159000		209000	355000	ug/kg	3.45	92.1	(0%-20%)			
Beryllium	159000		2020	147000	ug/kg	0.871	91.4	(0%-20%)			
Cadmium	159000	J	374	131000	ug/kg	2.47	82.5	(0%-20%)			
Calcium	1590000		872000	2220000	ug/kg	1.74	84.7	(0%-20%)			
Chromium	159000		35100	179000	ug/kg	4.55	90.3	(0%-20%)			
Cobalt	159000		16600	155000	ug/kg	1.65	86.9	(0%-20%)			
Copper	159000		33100	190000	ug/kg	2.44	98.8	(0%-20%)			
Iron	1590000		32500000	37900000	ug/kg	8.25	N/A	(0%-20%)			
Lead	159000		37400	174000	ug/kg	0.234	85.9	(0%-20%)			
Magnesium	1590000		2180000	3820000	ug/kg	6.59	103	(0%-20%)			
Manganese	159000		389000	520000	ug/kg	4.22	82.3	(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 18 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Nickel	159000	43300		183000	ug/kg	3.38	87.9	(0%-20%)	TXT1	08/12/19	17:41
Potassium	1590000	1410000		3070000	ug/kg	2.75	105	(0%-20%)			
Selenium	159000	J 3290		129000	ug/kg	3.78	79.3	(0%-20%)			
Silver	31800	U ND		27400	ug/kg	1.34	86.4	(0%-20%)			
Sodium	1590000	J 69700		1450000	ug/kg	0.596	87.2	(0%-20%)			
Thallium	159000	U ND		138000	ug/kg	5.13	86.2	(0%-20%)		08/12/19	17:53
Vanadium	159000	73700		217000	ug/kg	3.58	90	(0%-20%)		08/12/19	17:41
Zinc	159000	138000		283000	ug/kg	1.3	91.2	(0%-20%)			
QC1204355559 485262002 PS											
Antimony	500	U ND		431	ug/L		85.8	(75%-125%)		08/12/19	17:43
Manganese	500	1240		1680	ug/L		87.7	(75%-125%)			
QC1204337826 485262002 SDILT											
Aluminum		82300		19600	ug/L	19.1		(0%-20%)		08/12/19	17:45
Antimony		U ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic		J 14.8	U	ND	ug/L	N/A		(0%-20%)			
Barium		668		149	ug/L	11.2		(0%-20%)			
Beryllium		6.46	J	1.73	ug/L	33.5		(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 19 of 22

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Cadmium	J	1.20	U	ND	ug/L	N/A		(0%-20%)	TXT1	08/12/19	17:45
Calcium		2790		646	ug/L	16		(0%-20%)			
Chromium		112		25.6	ug/L	13.9		(0%-20%)			
Cobalt		53.2		11.8	ug/L	10.9		(0%-20%)			
Copper		106		20.3	ug/L	4.03		(0%-20%)			
Iron		104000		24400	ug/L	17.5		(0%-20%)			
Lead		119		27.4	ug/L	14.6		(0%-20%)			
Magnesium		6960		1620	ug/L	16.5		(0%-20%)			
Manganese		1240		280	ug/L	12.7		(0%-20%)			
Nickel		138		31.4	ug/L	13.3		(0%-20%)			
Potassium		4490		1050	ug/L	16.4		(0%-20%)			
Selenium	J	10.5	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium	J	223	J	84.8	ug/L	90.4		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		08/12/19	17:57

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 20 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1899047										
Vanadium		236		52.3	ug/L	11		(0%-20%)	TXT1	08/12/19	17:45
Zinc		441		98.4	ug/L	11.6		(0%-20%)			
Metals Analysis-Mercury											
Batch	1904592										
QC1204351034	485262001	DUP									
Mercury		U	ND	U	ND	ug/L	N/A		MTM1	08/08/19	13:30
QC1204351033	LCS										
Mercury	2.00			1.85	ug/L		92.5	(80%-120%)		08/08/19	13:27
QC1204351032	MB										
Mercury			U	ND	ug/L					08/08/19	13:25
QC1204351035	485262001	MS									
Mercury	2.00	U	ND	2.07	ug/L		101	(75%-125%)		08/08/19	13:32
QC1204351036	485262001	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		08/08/19	13:33
Batch	1904595										
QC1204351040	485262002	DUP									
Mercury			113	115	ug/kg	2.3 ^		(+/-37.2)	MTM1	08/08/19	15:30
QC1204351039	LCS										
Mercury	109			104	ug/kg		94.9	(80%-120%)		08/08/19	15:23
QC1204351038	MB										
Mercury			U	ND	ug/kg					08/08/19	15:22
QC1204351041	485262002	MS									
Mercury	342		113	438	ug/kg		95	(80%-120%)		08/08/19	15:32

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

QC Summary

Workorder: 485262

Page 21 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 1904595											
QC1204351042	485262002	SDILT									
Mercury		0.598	J	0.086	ug/L	28.1		(0%-10%)	MTM1	08/08/19	15:34
Nutrient Analysis											
Batch 1899590											
QC1204339197	485262002	DUP									
Nitrogen, Ammonia		978		895	mg/kg	8.92		(0%-20%)	KLP1	08/08/19	12:55
QC1204339196	LCS										
Nitrogen, Ammonia	50.0			47.2	mg/kg		94.4	(90%-110%)		08/08/19	11:11
QC1204339195	MB										
Nitrogen, Ammonia			J	1.91	mg/kg					08/08/19	11:10
QC1204339199	485262002	MS									
Nitrogen, Ammonia	160	978		1050	mg/kg		N/A	(90%-110%)		08/08/19	12:56
Batch 1899832											
QC1204339685	485556001	DUP									
Nitrogen, Ammonia		0.345		0.361	mg/L	4.53		(0%-20%)	KLP1	07/25/19	12:13
QC1204339690	LCS										
Nitrogen, Ammonia	1.00			1.04	mg/L		104	(90%-110%)		07/25/19	11:48
QC1204339689	MB										
Nitrogen, Ammonia			J	0.0356	mg/L					07/25/19	11:23
QC1204339687	485556001	MS									
Nitrogen, Ammonia	1.00	0.345		1.31	mg/L		96.5	(90%-110%)		07/25/19	12:14

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported

GEL LABORATORIES LLC

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

QC Summary

Workorder: 485262

Page 22 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
B											
E											
E											
FB											
H											
J											
J											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

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

QC Summary

Report Date: September 26, 2019

Page 1 of 5

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

Contact: Ms. Cynthia Logsdon

Workorder: 485262

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1898796										
QC1204337143	485262006 DUP										
Pct Uranium-235	U	0.00	U	0.00	percent	N/A		N/A	MP2	07/24/19	21:42
Uranium-233/234	U	0.285		0.272	pCi/L	33.1		(0% - 100%)			
	Uncertainty	+/-0.274		+/-0.195							
Uranium-235/236	U	0.0501	U	0.0242	pCi/L	N/A		N/A			
	Uncertainty	+/-0.143		+/-0.125							
Uranium-238	U	0.159	U	0.0429	pCi/L	N/A		N/A			
	Uncertainty	+/-0.203		+/-0.111							
QC1204337144	LCS										
Pct Uranium-235				1.07	percent					07/24/19	21:42
Uranium-233/234				12.3	pCi/L						
	Uncertainty			+/-1.17							
Uranium-235/236				0.971	pCi/L						
	Uncertainty			+/-0.378							
Uranium-238	13.6			13.9	pCi/L		102	(75%-125%)			
	Uncertainty			+/-1.25							
QC1204337142	MB										
Pct Uranium-235			U	0.00	percent					07/24/19	21:42
Uranium-233/234			U	-0.0617	pCi/L						
	Uncertainty			+/-0.0932							
Uranium-235/236			U	0.00794	pCi/L						
	Uncertainty			+/-0.0859							
Uranium-238			U	0.00642	pCi/L						
	Uncertainty			+/-0.0695							

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

QC Summary

Workorder: 485262

Page 2 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1898800										
QC1204337155	485262002	DUP									
Uranium-233/234		117		105	pCi/g	10.7		(0%-20%)	MP2	08/01/19	08:21
	Uncertainty	+/-4.47		+/-4.06							
Uranium-235/236		4.98		5.33	pCi/g	6.7		(0%-20%)			
	Uncertainty	+/-1.04		+/-1.03							
Uranium-238		28.0		25.5	pCi/g	9.4		(0%-20%)			
	Uncertainty	+/-2.19		+/-2.01							
QC1204337156	LCS										
Uranium-233/234				11.9	pCi/g					08/01/19	08:21
	Uncertainty			+/-1.26							
Uranium-235/236				0.330	pCi/g						
	Uncertainty			+/-0.252							
Uranium-238	12.3			12.4	pCi/g		100	(75%-125%)			
	Uncertainty			+/-1.28							
QC1204337154	MB										
Uranium-233/234				0.434	pCi/g					08/01/19	08:21
	Uncertainty			+/-0.326							
Uranium-235/236			U	0.161	pCi/g						
	Uncertainty			+/-0.233							
Uranium-238			U	0.036	pCi/g						
	Uncertainty			+/-0.135							
Batch	1898804										
QC1204337168	485262031	DUP									
Uranium-233/234		225		227	pCi/g	0.841		(0%-20%)	MP2	08/01/19	13:03
	Uncertainty	+/-3.73		+/-4.67							
Uranium-235/236		11.9		10.4	pCi/g	13.3		(0%-20%)			
	Uncertainty	+/-0.955		+/-1.11							
Uranium-238		37.4		36.3	pCi/g	3.08		(0%-20%)			
	Uncertainty	+/-1.52		+/-1.87							
QC1204337169	LCS										
Uranium-233/234				11.8	pCi/g					08/01/19	13:03
	Uncertainty			+/-1.46							
Uranium-235/236				0.427	pCi/g						
	Uncertainty			+/-0.344							

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QC Summary

Workorder: 485262

Page 3 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1898804										
Uranium-238	12.6			12.4	pCi/g		98.1	(75%-125%)	MP2	08/01/19	13:03
	Uncertainty			+/-1.49							
QC1204337167	MB										
Uranium-233/234			U	0.108	pCi/g					08/01/19	13:03
	Uncertainty			+/-0.117							
Uranium-235/236			U	-0.000573	pCi/g						
	Uncertainty			+/-0.0901							
Uranium-238			U	0.0537	pCi/g						
	Uncertainty			+/-0.0885							
Rad Liquid Scintillation											
Batch	1898805										
QC1204337171	485262032 DUP										
Technetium-99	U	5.75	U	12.0	pCi/g	N/A			N/A LXB3	08/04/19	18:39
	Uncertainty	+/-21.8		+/-23.1							
QC1204337172	LCS										
Technetium-99	743			657	pCi/g		88.5	(75%-125%)		08/04/19	18:55
	Uncertainty			+/-41.4							
QC1204337170	MB										
Technetium-99			U	-1.02	pCi/g					08/04/19	18:22
	Uncertainty			+/-21.6							
Batch	1898807										
QC1204337177	485262002 DUP										
Technetium-99	U	-3.44	U	2.87	pCi/g	N/A			N/A LXB3	08/04/19	17:32
	Uncertainty	+/-13.1		+/-13.3							
QC1204337178	LCS										
Technetium-99	464			389	pCi/g		83.8	(75%-125%)		08/04/19	17:48
	Uncertainty			+/-22.8							
QC1204337176	MB										
Technetium-99			U	10.4	pCi/g					08/04/19	17:15
	Uncertainty			+/-10.8							
Batch	1899271										
QC1204338359	485262010 DUP										
Technetium-99	U	13.6	U	19.6	pCi/L	N/A			N/A JJ3	08/05/19	07:21
	Uncertainty	+/-21.6		+/-23.3							

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QC Summary

Workorder: 485262

Page 4 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1899271										
QC1204338360	LCS										
Technetium-99	854			779	pCi/L		91.2	(75%-125%)	JJ3	08/04/19	16:35
	Uncertainty			+/-45.9							
QC1204338358	MB										
Technetium-99			U	-9.04	pCi/L					08/04/19	15:50
	Uncertainty			+/-20.3							
Batch	1915173										
QC1204377126	485262003 DUP										
Technetium-99	U	6.54	U	-4.29	pCi/L	N/A		N/A	JJ3	09/22/19	07:34
	Uncertainty			+/-20.6							
QC1204377127	LCS										
Technetium-99	854			840	pCi/L		98.4	(75%-125%)		09/22/19	07:51
	Uncertainty			+/-48.4							
QC1204377125	MB										
Technetium-99			U	18.8	pCi/L					09/22/19	07:18
	Uncertainty			+/-21.1							

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
- 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

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QC Summary

Workorder: 485262

Page 5 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Technical Case Narrative
Westinghouse Electric Co, LLC
SDG #: 485262

Metals

Product: Determination of Metals by ICP

Analytical Method: SW846 3005A/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1899016

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 1899015

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262001	SW-22
485262003	SW-21
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204337751	Method Blank (MB)ICP
1204337752	Laboratory Control Sample (LCS)
1204337755	485262001(SW-22L) Serial Dilution (SD)
1204337753	485262001(SW-22S) Matrix Spike (MS)
1204337754	485262001(SW-22SD) Matrix Spike Duplicate (MSD)

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: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1899047

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1899045

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262031	SED-27
485262032	SED-28
485262034	SED-17
485262036	DUP-01-071819
1204337822	Method Blank (MB)ICP
1204337823	Laboratory Control Sample (LCS)
1204337826	485262002(SED-22L) Serial Dilution (SD)
1204337824	485262002(SED-22S) Matrix Spike (MS)
1204337825	485262002(SED-22SD) Matrix Spike Duplicate (MSD)
1204355559	485262002(SED-22PS) 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.

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
1204337824 (SED-22MS)	Manganese	67.2* (75%-125%)

1204337825 (SED-22MSD)	Antimony	74.6* (75%-125%)
------------------------	----------	------------------

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204337824MS and 1204337825MSD (SED-22)	Aluminum	RPD 29.7* (0%-20%)

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. Samples required dilutions in order to minimize suppression of thallium due to matrix interferences. 485262002 (SED-22), 485262004 (SED-21), 485262011 (SED-23), 485262012 (SED-24) and 485262020 (SED-13). Sample was diluted to ensure that silver concentration was within the linear calibration range of the instrument. 485262030 (SED-26).

Analyte	485262					
	002	004	011	012	020	030
Silver	1X	1X	1X	1X	1X	10X
Thallium	10X	10X	10X	10X	10X	1X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1898996

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1898995

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24

485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262031	SED-27
485262032	SED-28
485262034	SED-17
485262036	DUP-01-071819
1204337697	Method Blank (MB)ICP-MS
1204337698	Laboratory Control Sample (LCS)
1204337703	Laboratory Control Sample (LCS)
1204337701	485262002(SED-22L) Serial Dilution (SD)
1204337699	485262002(SED-22S) Matrix Spike (MS)
1204337704	485262002(SED-22S) Matrix Spike (MS)
1204337700	485262002(SED-22SD) Matrix Spike Duplicate (MSD)
1204343458	485262002(SED-22SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 485262002 (SED-22), 485262009 (SED-20), 485262014 (SED-19), 485262029 (SED-25), 485262030 (SED-26), 485262031 (SED-27) and 485262032 (SED-28) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	485262									
	002	004	005	007	009	011	012	014	016	018
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	10X	2X	2X	2X	10X	2X	2X	10X	2X	2X
Uranium-238	10X	2X	2X	2X	10X	2X	2X	10X	2X	2X

Analyte	485262								
	020	022	026	029	030	031	032	034	036
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	100X	200X	20X	20X	2X	2X
Uranium-238	2X	2X	2X	20X	200X	10X	20X	2X	2X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3010A/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1899001

Preparation Method: SW846 3010A

Preparation Procedure: GL-MA-E-008 REV# 19

Preparation Batch: 1899000

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262023	SW-22
485262024	SW-21
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204337713	Method Blank (MB)ICP-MS
1204337714	Laboratory Control Sample (LCS)
1204337715	Laboratory Control Sample (LCS)
1204337719	485262006(SW-18L) Serial Dilution (SD)
1204337716	485262006(SW-18D) Sample Duplicate (DUP)
1204337717	485262006(SW-18S) Matrix Spike (MS)
1204337718	485262006(SW-18S) Matrix Spike (MS)

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.

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.

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**Analytical Method:** SW846 7470A**Analytical Procedure:** GL-MA-E-010 REV# 36**Analytical Batch:** 1904592**Preparation Method:** SW846 7470A Prep**Preparation Procedure:** GL-MA-E-010 REV# 36**Preparation Batch:** 1904590

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262001	SW-22
485262003	SW-21
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204351032	Method Blank (MB)CVAA
1204351033	Laboratory Control Sample (LCS)
1204351036	485262001(SW-22L) Serial Dilution (SD)
1204351034	485262001(SW-22D) Sample Duplicate (DUP)
1204351035	485262001(SW-22S) Matrix Spike (MS)

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: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**Analytical Method:** SW846 7471A**Analytical Procedure:** GL-MA-E-010 REV# 36**Analytical Batch:** 1904595

Preparation Method: SW846 7471A Prep
Preparation Procedure: GL-MA-E-010 REV# 36
Preparation Batch: 1904594

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262031	SED-27
485262032	SED-28
485262034	SED-17
485262036	DUP-01-071819
1204351038	Method Blank (MB)CVAA
1204351039	Laboratory Control Sample (LCS)
1204351042	485262002(SED-22L) Serial Dilution (SD)
1204351040	485262002(SED-22D) Sample Duplicate (DUP)
1204351041	485262002(SED-22S) Matrix Spike (MS)

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.

General Chemistry

Product: Ion Chromatography
Analytical Method: SW846 9056A
Analytical Procedure: GL-GC-E-086 REV# 27
Analytical Batches: 1903814 and 1903812

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
1204349311	Method Blank (MB)
1204349312	Laboratory Control Sample (LCS)

1204349313 485262002(SED-22) Sample Duplicate (DUP)
1204349315 485262002(SED-22) 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	1204349315 (SED-22MS)	37.6* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batch: 1903827

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262001	SW-22
485262003	SW-21
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
1204349350	Method Blank (MB)
1204349351	Laboratory Control Sample (LCS)
1204349352	486599001(NonSDG) Sample Duplicate (DUP)
1204349353	486599001(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1204349352 (Non SDG 486599001DUP), 1204349353 (Non SDG 486599001PS) and 485262010 (SW-23) were diluted because target analyte concentrations exceeded the calibration range. Samples 1204349352 (Non SDG 486599001DUP) and 1204349353 (Non SDG 486599001PS) were diluted based on historical data. 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.

Analyte	485262
	010
Fluoride	2X

Sample Re-analysis

Samples 1204349350 (MB), 1204349351 (LCS), 1204349352 (Non SDG 486599001DUP) and 1204349353 (Non SDG 486599001PS) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1905737 and 1905736

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
1204353690	Method Blank (MB)
1204353691	Laboratory Control Sample (LCS)
1204353692	485262005(SED-15) Sample Duplicate (DUP)
1204353693	485262005(SED-15) 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	1204353693 (SED-15MS)	72.9* (75%-125%)

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batch: 1905773

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262019	SW-13
485262021	SW-11
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204353788	Method Blank (MB)
1204353789	Laboratory Control Sample (LCS)
1204353790	485262019(SW-13) Sample Duplicate (DUP)
1204353791	485262019(SW-13) Post Spike (PS)

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: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1905785 and 1905784

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262031	SED-27
485262032	SED-28
485262034	SED-17

485262036	DUP-01-071819
1204353775	Method Blank (MB)
1204353776	Laboratory Control Sample (LCS)
1204353777	485262026(SED-12) Sample Duplicate (DUP)
1204353779	485262026(SED-12) 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	1204353779 (SED-12MS)	23.9* (75%-125%)

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1 Modified

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1899590

Preparation Method: EPA 350.2 Modified Prep

Preparation Procedure: GL-GC-E-072 REV# 17

Preparation Batch: 1899589

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25

485262030	SED-26
485262031	SED-27
485262032	SED-28
485262034	SED-17
485262036	DUP-01-071819
1204339195	Method Blank (MB)
1204339196	Laboratory Control Sample (LCS)
1204339197	485262002(SED-22) Sample Duplicate (DUP)
1204339199	485262002(SED-22) 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.

Technical Information

Sample Dilutions

The following samples 1204339197 (SED-22DUP), 1204339199 (SED-22MS), 485262002 (SED-22), 485262004 (SED-21), 485262009 (SED-20), 485262011 (SED-23), 485262014 (SED-19), 485262022 (SED-11), 485262026 (SED-12), 485262029 (SED-25), 485262030 (SED-26) and 485262032 (SED-28) were diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	485262									
	002	004	009	011	014	022	026	029	030	032
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1899832

Preparation Method: EPA 350.1 Prep

Preparation Procedure: GL-GC-E-072 REV# 17

Preparation Batch: 1899831

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262001	SW-22
485262003	SW-21
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16

485262017	SW-14
485262019	SW-13
485262021	SW-11
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204339685	485556001(NonSDG) Sample Duplicate (DUP)
1204339687	485556001(NonSDG) Matrix Spike (MS)
1204339689	Method Blank (MB)
1204339690	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following sample 485262015 (SW-16) was diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	485262
	015
Nitrogen, Ammonia	5X

Sample Re-analysis

Sample 1204339690 (LCS) was re-analyzed due to instrument failure. The results from the reanalysis are reported. Samples 1204339690 (LCS), 485262001 (SW-22), 485262003 (SW-21), 485262006 (SW-18), 485262008 (SW-20), 485262010 (SW-23) and 485262013 (SW-19) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

Radiochemistry

Product: Alphaspec U, Liquid

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1898796

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262006	SW-18
485262008	SW-20
485262010	SW-23

485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262023	SW-22
485262024	SW-21
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204337142	Method Blank (MB)
1204337143	485262006(SW-18) Sample Duplicate (DUP)
1204337144	Laboratory Control Sample (LCS)

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: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1898800

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1898477

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25

485262030	SED-26
485262034	SED-17
485262036	DUP-01-071819
1204337154	Method Blank (MB)
1204337155	485262002(SED-22) Sample Duplicate (DUP)
1204337156	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank Criteria

The blank result (See Below) is greater than the MDC but less than the required detection limit.

Sample	Analyte	Value
1204337154 (MB)	Uranium-233/234	Result: 0.434 pCi/g > MDA: 0.369 pCi/g <= RDL: 0.500 pCi/g

Technical Information

Recounts

Sample 485262012 (SED-24) was recounted due to detector error. The recount is reported.

Miscellaneous Information

Additional Comments

The tracer peak centroid for sample 1204337156 (LCS) 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: 1898804

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1898481

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

GEL Sample ID#

485262031

Client Sample Identification

SED-27

485262032	SED-28
1204337167	Method Blank (MB)
1204337168	485262031(SED-27) Sample Duplicate (DUP)
1204337169	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

Analytical Method: ASTM D 2216 (Modified)

Analytical Procedure: GL-OA-E-020 REV# 13

Analytical Batch: 1898477

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1898477

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262034	SED-17
485262036	DUP-01-071819
1204336388	485262002(SED-22) 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: 1898481

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1898481

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262031	SED-27
485262032	SED-28
1204336396	485262031(SED-27) 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: 1898805

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262031	SED-27
485262032	SED-28
1204337170	Method Blank (MB)
1204337171	485262032(SED-28) Sample Duplicate (DUP)
1204337172	Laboratory Control Sample (LCS)

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: 1898807

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262034	SED-17
485262036	DUP-01-071819
1204337176	Method Blank (MB)
1204337177	485262002(SED-22) Sample Duplicate (DUP)
1204337178	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 485262011 (SED-23) and 485262012 (SED-24) were recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

Product: Liquid Scint Tc99, Liquid

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1899271

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262023	SW-22
485262024	SW-21
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204338358	Method Blank (MB)
1204338359	485262010(SW-23) Sample Duplicate (DUP)
1204338360	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 1204338359 (SW-23DUP) and 485262010 (SW-23) were recounted due to high relative percent difference/relative error ratio. 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.

Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager:
 Phone # 803-647-1920
 Fax # _____

Client Name: Westing house
 Subject/Site Name: WNUC00518
 Address: 5801 Bluff RD Hopkins SC. 29061
 Collected By: Benjamin Fife / Judith's Leaphart
 Send Results To: Pina Joyner
 Date Collected (mm-dd-yy): 2019
 Collected (Military) (hhmm): _____
 QC Code (2): _____
 Field Filtered (3): _____
 Sample Matrix (4): _____
 * For composites - indicate start and stop date/time

Sample ID	SW-22	SED-22	SW-21	SED-21	SED-15	SW-18	SED-18	SW-20	SED-20	Date	Time	Received by (signed)	Date	Time	Should this sample be considered:		Total number of containers		Sample Analysis Requested (5)		Comments					
															(7) Known or possible hazards	Radioactive	SA	W/NE	SA	W/NE		Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)
SW-22										07-15-2019	1315	G	N	SW	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	Note: extra sample is required for sample specific QC
SED-22										07-15-2019	1330	G	N	SD	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SW-21										07-15-19	1600	G	N	SW	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SED-21										07-15-19	1600	G	N	SD	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SED-15										07-16-19	1120	G	N	SD	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SW-18										07-16-19	1239	G	N	SW	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SED-18										07-16-19	1230	G	N	SD	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SW-20										07-16-19	1400	G	N	SW	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SED-20										07-16-19	1400	G	N	SD	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	
SW-23										07-16-19	1545	G	N	SW	N	OT	X	X	X	X	Ammonia	HAZARDOUS	Isotopic info	Isotopic info	Preservative Type (6)	

Chain of Custody Signatures
 Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date 7/18/19 Time 16:27
 1 A. Johnson
 2 _____
 3 _____

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharge)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other: _____

- 1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a -Y- for yes the sample was field filtered or -N- for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards
 FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive
 Listed Waste
 LW = Listed Waste
 (F,K,P and U-listed wastes.)
 Waste code(s): _____
 Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____
 RCRA Metals
 As = Arsenic Hg = Mercury
 Ba = Barium Se = Selenium
 Cd = Cadmium Ag = Silver
 Cr = Chromium MR = Miscellaneous
 Pb = Lead PCB = Polychlorinated biphenyls
 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.)

Client Name: Westinghouse
 Project/Site Name: WVUC00518
 Address: 5801 Bluff Rd. Hopkins S.C. 29061
 Collected By: Benjamin Fritzel
 Sample ID: Indios leopant
 * For composites - indicate start and stop date/time

Phone # 803-647-1920
 Fax #
 GEL Work Order Number: 803-647-1920
 Chain of Custody and Analytical Request
 GEL Project Manager:

Sample Analysis Requested (5)	Should this sample be considered:		Total number of containers	Preservative Type (6)		Comments
	(7) Known or possible hazards	isotopic info		←	→	
SA			1			Note: extra sample is required for sample specific QC
NI			1			
Fluoride			4	X	X	
Ammonia			4	X	X	
Tal Metals			1	X	X	
Technetium 99			1	X	X	
Fluoride			4	X	X	
Ammonia			4	X	X	
Tal Metals			1	X	X	
Technetium 99			4	X	X	
Fluoride			4	X	X	
Ammonia			4	X	X	
Tal Metals			1	X	X	

Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date _____ Time _____
 1. Benjamin Fritzel 07-18-19 16:27
 2. _____
 3. _____

Chain of Custody Signatures
 TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surchage)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:
 1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a 'Y' - for yes the sample was field filtered or 'N' - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) Are there any known or possible hazards associated with these samples?
 Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive
 Listed Waste: LW = Listed Waste
 Waste code(s):
 Other: OT = Other / Unknown
 (F, K, P and U-listed wastes.)
 Description: misc. health hazards, etc.)
 Please provide any additional details below regarding handling and/or disposal of site collected from, odd matrices, etc.)
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Miscellaneous, Pb = Lead, RCRA metals: biphenyls
 TSCA Regulated: PCB = Polychlorinated biphenyls

Page: 3 of 4
 Project # 60595649.9
 FL Quote #:
 QC Number (1):
 PO Number:

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Work Order Number: 803-647-1920
 GEL Project Manager:

Client Name: Westinghouse Phone # 803-647-1920
 Project/Site Name: WNA-C00518 Fax #
 Address: 5801 Bluff Rd. Hopkins SC 29061
 Collected By: Benjamin Fritzel Send Results To: Diana Joyner
James Leaphant
 Sample ID
 * For composites - indicate start and stop date/time

Sample ID	Date Collected	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Sample Analysis Requested (5)		Preservative Type (6)	Comments					
					(7) Known or possible hazards	isotopic info	Total number of containers	(8) Preservative Type (6)							
JW-11	07-17-19	1345 G	N	SW	N	OT	4	X	SA	Ammonia	Fluoride	Technetium 99	Isotopic Analysis		
JED-11	07-17-19	1345 G	N	SD	N	OT	1								
SW-22	07-17-19	1405 G	N	SW	N	OT	1								
SW-21	07-17-19	1415 G	N	SW	N	OT	1								
SW-12	07-17-19	1515 G	N	SW	N	OT	4	X							
JED-12	07-17-19	1515 G	N	SD	N	OT	1								
ED-01-071819	07-18-19	0750 G	N	SW	N	OT	4	X	X	X	X	X	X	X	X
ED-02-071819	07-18-19	0800 G	N	SW	N	OT	4	X	X	X	X	X	X	X	X
JED-25	07-18-19	0915 G	N	SD	N	OT	1								
JED-26	07-18-19	0940 C	N	SD	N	OT	1								

Chain of Custody Signatures
 Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date 7/18/19 Time 16:27
 1 [Signature]
 2 _____
 3 _____

For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)
 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=Faecal, N=Nasal
 5. Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6. Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7. Are there any known or possible hazards associated with these samples?
 Listed Waste: _____
 Characteristic Hazards: _____
 FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 TSCA Regulated
 PCB = Polychlorinated biphenyls
 RCRA Metals: _____
 AS = Arsenic Hg = Mercury
 Ba = Barium Se = Selenium
 Cd = Cadmium Ag = Silver
 Cr = Chromium MR = Miscellaneous RCRA metals
 Pb = Lead
 Other: _____
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Chain of Custody and Analytical Request
GEL Work Order Number: 803-647-1990
Client Name: Westinghouse
Project #: 60595649.9
QC Number (1):
Phone #: 803-647-1990
Fax #: 803-647-1990
Address: 5801 Blatt Rd, Hopkins S.C. 29061
Collected By: Benjamin Taylor
Send Results To: Diana Joyner
Sample ID: Jumbo Isophane
QC Code (2): G
Field Filtered (3): N
Sample Matrix (4): SD
Field Matrix (5): SD

Should this sample be considered: (7) Known or possible hazards Please supply isotopic info	Sample Analysis Requested (6) (Fill in the number of containers for each test)				Comments
	SA	NI	NI	NI	
Ammonia	X	X	X	X	Ammonia
Fluoride	X	X	X	X	Fluoride
Technetium 99m	X	X	X	X	Technetium 99m
TRM Metals	X	X	X	X	TRM Metals
Isotopic Inventory	X	X	X	X	Isotopic Inventory

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>Benjamin Taylor</i>	07-18-19	<i>Diana Joyner</i>	07-18-19	16:27

Chain of Custody Signatures
TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)
Fax Results: Yes No
Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
Additional Remarks:
For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
Sample Collection Time Zone: Eastern Pacific Central Mountain Other: _____

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank
7.) Are there any known or possible hazards associated with these samples?
Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive
Listed Waste: LW = Listed Waste
Other: OT = Other / Unknown
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.)

RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Miscellaneous, Pb = Lead
TSCA Regulated: PCB = Polychlorinated biphenyls

List of current GEL Certifications as of 26 September 2019

State	Certification
Alaska	17-018
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
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	2019-013
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-28
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 09, 2019

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

Re: ENV-CONSENTA
Work Order: 497413

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 22, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

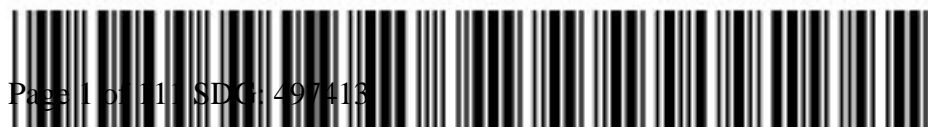
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without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

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

Sincerely,

Hope Taylor
Project Manager

Purchase Order: 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: 497413 GEL Work Order: 497413

The Qualifiers in this report are defined as follows:

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

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

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

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

Reviewed by top a d

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 0-6	Project: WNUC01519
Sample ID: 497413001	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:35	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 59.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride	J	1.14	0.832	2.45	mg/kg	9.90	1	LXA2	11/23/19	1648	1942542	1
Nitrate-N	U	ND	0.808	2.45	mg/kg	9.90	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		25900000	16500	48500	ug/kg	98.0	1	TXT1	12/03/19	1826	1942808	2
Antimony	U	ND	800	4850	ug/kg	98.0	1					
Arsenic	J	4240	1210	7270	ug/kg	98.0	1					
Barium		207000	242	1210	ug/kg	98.0	1					
Beryllium		1830	242	1210	ug/kg	98.0	1					
Cadmium	U	ND	242	1210	ug/kg	98.0	1					
Calcium		809000	19400	60600	ug/kg	98.0	1					
Chromium		33800	364	2420	ug/kg	98.0	1					
Cobalt		8360	364	1210	ug/kg	98.0	1					
Copper		27900	727	4850	ug/kg	98.0	1					
Iron		17600000	19400	60600	ug/kg	98.0	1					
Lead		28200	800	4850	ug/kg	98.0	1					
Magnesium		2800000	20600	72700	ug/kg	98.0	1					
Manganese		223000	485	2420	ug/kg	98.0	1					
Nickel		15200	364	1210	ug/kg	98.0	1					
Potassium		1400000	15500	60600	ug/kg	98.0	1					
Selenium	U	ND	1210	7270	ug/kg	98.0	1					
Sodium		125000	17000	60600	ug/kg	98.0	1					
Vanadium		85600	242	1210	ug/kg	98.0	1					
Zinc		69100	970	4850	ug/kg	98.0	1					
Thallium	U	ND	12100	48500	ug/kg	98.0	10	TXT1	12/03/19	1837	1942808	3
Silver	U	ND	2420	12100	ug/kg	98.0	10	TXT1	12/04/19	1114	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		86.4	4.87	34.1	ug/kg	98.4	2	PRB	12/08/19	1650	1942804	5
Uranium-238		6030	32.1	97.3	ug/kg	98.4	2					
Uranium-234	U	ND	4.87	24.3	ug/kg	98.4	2	PRB	12/09/19	1411	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		455	21.8	60.6	mg/kg	49.0	10	AXH3	11/26/19	0720	1942616	7

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 0-6
Sample ID: 497413001

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 6-12" Project: WNUC01519
Sample ID: 497413002 Client ID: WNUC009
Matrix: Soil
Collect Date: 20-NOV-19 14:40
Receive Date: 22-NOV-19
Collector: Client
Moisture: 46.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		2.56	0.704	2.07	mg/kg	11.0	1	LXA2	11/23/19	1847	1942542	1
Nitrate-N	U	ND	0.683	2.07	mg/kg	11.0	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		19800000	12000	35300	ug/kg	93.8	1	TXT1	12/03/19	1859	1942808	2
Antimony	U	ND	583	3530	ug/kg	93.8	1					
Arsenic	J	2310	884	5300	ug/kg	93.8	1					
Barium		157000	177	884	ug/kg	93.8	1					
Beryllium		1860	177	884	ug/kg	93.8	1					
Cadmium	U	ND	177	884	ug/kg	93.8	1					
Calcium		441000	14100	44200	ug/kg	93.8	1					
Chromium		28300	265	1770	ug/kg	93.8	1					
Cobalt		5920	265	884	ug/kg	93.8	1					
Copper		17600	530	3530	ug/kg	93.8	1					
Iron		12400000	14100	44200	ug/kg	93.8	1					
Lead		15200	583	3530	ug/kg	93.8	1					
Magnesium		2180000	15000	53000	ug/kg	93.8	1					
Manganese		128000	353	1770	ug/kg	93.8	1					
Nickel		10800	265	884	ug/kg	93.8	1					
Potassium		1060000	11300	44200	ug/kg	93.8	1					
Selenium	U	ND	884	5300	ug/kg	93.8	1					
Sodium		97100	12400	44200	ug/kg	93.8	1					
Vanadium		58600	177	884	ug/kg	93.8	1					
Zinc		43500	707	3530	ug/kg	93.8	1					
Thallium	U	ND	8840	35300	ug/kg	93.8	10	TXT1	12/03/19	1902	1942808	3
Silver	U	ND	1770	8840	ug/kg	93.8	10	TXT1	12/04/19	1132	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	21.4	3.67	25.7	ug/kg	97.5	2	PRB	12/08/19	1702	1942804	5
Uranium-238		2490	24.2	73.4	ug/kg	97.5	2					
Uranium-234	U	ND	3.67	18.4	ug/kg	97.5	2	PRB	12/09/19	1423	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		287	14.1	39.2	mg/kg	41.7	10	AXH3	11/26/19	0732	1942616	7

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 6-12"
Sample ID: 497413002

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-29 12-16"	Project:	WNUC01519
Sample ID:	497413003	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	20-NOV-19 14:45		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	37.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		2.61	0.505	1.48	mg/kg	9.24	1	LXA2	11/23/19	1917	1942542	1
Nitrate-N	U	ND	0.490	1.48	mg/kg	9.24	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		17000000	10100	29700	ug/kg	92.4	1	TXT1	12/03/19	1904	1942808	2
Antimony	U	ND	490	2970	ug/kg	92.4	1					
Arsenic	J	2450	743	4460	ug/kg	92.4	1					
Barium		147000	149	743	ug/kg	92.4	1					
Beryllium		2130	149	743	ug/kg	92.4	1					
Cadmium	U	ND	149	743	ug/kg	92.4	1					
Calcium		272000	11900	37100	ug/kg	92.4	1					
Chromium		25300	223	1490	ug/kg	92.4	1					
Cobalt		3700	223	743	ug/kg	92.4	1					
Copper		13100	446	2970	ug/kg	92.4	1					
Iron		9170000	11900	37100	ug/kg	92.4	1					
Lead		11300	490	2970	ug/kg	92.4	1					
Magnesium		971000	12600	44600	ug/kg	92.4	1					
Manganese		66200	297	1490	ug/kg	92.4	1					
Nickel		8400	223	743	ug/kg	92.4	1					
Potassium		297000	9500	37100	ug/kg	92.4	1					
Selenium	U	ND	743	4460	ug/kg	92.4	1					
Sodium		77700	10400	37100	ug/kg	92.4	1					
Vanadium		40300	149	743	ug/kg	92.4	1					
Zinc		29800	594	2970	ug/kg	92.4	1					
Thallium	U	ND	7430	29700	ug/kg	92.4	10	TXT1	12/03/19	1907	1942808	3
Silver	U	ND	1490	7430	ug/kg	92.4	10	TXT1	12/04/19	1135	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	17.6	3.02	21.1	ug/kg	94.0	2	PRB	12/08/19	1704	1942804	5
Uranium-238		2490	19.9	60.4	ug/kg	94.0	2					
Uranium-234	U	ND	3.02	15.1	ug/kg	94.0	2	PRB	12/09/19	1425	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		230	14.5	40.2	mg/kg	50.0	10	AXH3	11/26/19	0745	1942616	7

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 12-16"
Sample ID: 497413003

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 0-6"	Project: WNUC01519
Sample ID: 497413004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 09:55	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 52.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		2.26	0.712	2.09	mg/kg	9.93	1	LXA2	11/23/19	1947	1942542	1
Nitrate-N	U	ND	0.691	2.09	mg/kg	9.93	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		24000000	13900	40800	ug/kg	96.7	1	TXT1	12/03/19	1910	1942808	2
Antimony	U	ND	674	4080	ug/kg	96.7	1					
Arsenic	J	3600	1020	6120	ug/kg	96.7	1					
Barium		174000	204	1020	ug/kg	96.7	1					
Beryllium		1990	204	1020	ug/kg	96.7	1					
Cadmium	U	ND	204	1020	ug/kg	96.7	1					
Calcium		424000	16300	51000	ug/kg	96.7	1					
Chromium		32300	306	2040	ug/kg	96.7	1					
Cobalt		8260	306	1020	ug/kg	96.7	1					
Copper		24100	612	4080	ug/kg	96.7	1					
Iron		15100000	16300	51000	ug/kg	96.7	1					
Lead		41800	674	4080	ug/kg	96.7	1					
Magnesium		3240000	17300	61200	ug/kg	96.7	1					
Manganese		207000	408	2040	ug/kg	96.7	1					
Nickel		13400	306	1020	ug/kg	96.7	1					
Potassium		1580000	13100	51000	ug/kg	96.7	1					
Selenium	U	ND	1020	6120	ug/kg	96.7	1					
Sodium		95900	14300	51000	ug/kg	96.7	1					
Vanadium		71900	204	1020	ug/kg	96.7	1					
Zinc		68800	816	4080	ug/kg	96.7	1					
Thallium	U	ND	10200	40800	ug/kg	96.7	10	TXT1	12/03/19	1913	1942808	3
Silver	U	ND	2040	10200	ug/kg	96.7	10	TXT1	12/04/19	1138	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		85.9	4.07	28.5	ug/kg	96.5	2	PRB	12/08/19	1706	1942804	5
Uranium-238		5410	26.9	81.5	ug/kg	96.5	2					
Uranium-234	U	ND	4.07	20.4	ug/kg	96.5	2	PRB	12/09/19	1427	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		394	22.1	61.3	mg/kg	58.1	10	AXH3	11/26/19	0746	1942616	7

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 0-6"
Sample ID: 497413004

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"	Project: WNUC01519
Sample ID: 497413005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 56%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		3.43	0.784	2.30	mg/kg	10.2	1	LXA2	11/23/19	2017	1942542	1
Nitrate-N	U	ND	0.761	2.30	mg/kg	10.2	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		21700000	15000	44100	ug/kg	97.1	1	TXT1	12/03/19	1916	1942808	2
Antimony	U	ND	727	4410	ug/kg	97.1	1					
Arsenic	J	2490	1100	6610	ug/kg	97.1	1					
Barium		140000	220	1100	ug/kg	97.1	1					
Beryllium		2320	220	1100	ug/kg	97.1	1					
Cadmium	U	ND	220	1100	ug/kg	97.1	1					
Calcium		448000	17600	55100	ug/kg	97.1	1					
Chromium		28300	331	2200	ug/kg	97.1	1					
Cobalt		4640	331	1100	ug/kg	97.1	1					
Copper		17000	661	4410	ug/kg	97.1	1					
Iron		10000000	17600	55100	ug/kg	97.1	1					
Lead		13400	727	4410	ug/kg	97.1	1					
Magnesium		1400000	18700	66100	ug/kg	97.1	1					
Manganese		122000	441	2200	ug/kg	97.1	1					
Nickel		9480	331	1100	ug/kg	97.1	1					
Potassium		509000	14100	55100	ug/kg	97.1	1					
Selenium	U	ND	1100	6610	ug/kg	97.1	1					
Sodium		110000	15400	55100	ug/kg	97.1	1					
Vanadium		51200	220	1100	ug/kg	97.1	1					
Zinc		31500	882	4410	ug/kg	97.1	1					
Thallium	U	ND	11000	44100	ug/kg	97.1	10	TXT1	12/03/19	1919	1942808	3
Silver	U	ND	2200	11000	ug/kg	97.1	10	TXT1	12/04/19	1141	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	21.0	4.21	29.5	ug/kg	92.8	2	PRB	12/08/19	1707	1942804	5
Uranium-238		2690	27.8	84.2	ug/kg	92.8	2					
Uranium-234	U	ND	4.21	21.1	ug/kg	92.8	2	PRB	12/09/19	1429	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		392	19.6	54.6	mg/kg	48.1	10	AXH3	11/26/19	0752	1942616	7

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"
Sample ID: 497413005

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

Client Sample ID:	SED-31 0-6"	Project:	WNUC01519
Sample ID:	497413006	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	21-NOV-19 12:00		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	34.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		3.13	0.489	1.44	mg/kg	9.41	1	LXA2	11/23/19	2046	1942542	1
Nitrate-N	U	ND	0.475	1.44	mg/kg	9.41	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		20400000	9650	28400	ug/kg	92.8	1	TXT1	12/03/19	1922	1942808	2
Arsenic		4510	709	4260	ug/kg	92.8	1					
Barium		213000	142	709	ug/kg	92.8	1					
Beryllium		1690	142	709	ug/kg	92.8	1					
Cadmium	U	ND	142	709	ug/kg	92.8	1					
Calcium		796000	11400	35500	ug/kg	92.8	1					
Chromium		26400	213	1420	ug/kg	92.8	1					
Cobalt		14300	213	709	ug/kg	92.8	1					
Copper		20500	426	2840	ug/kg	92.8	1					
Iron		28600000	11400	35500	ug/kg	92.8	1					
Lead		22900	468	2840	ug/kg	92.8	1					
Magnesium		3080000	12100	42600	ug/kg	92.8	1					
Manganese		788000	284	1420	ug/kg	92.8	1					
Nickel		12200	213	709	ug/kg	92.8	1					
Selenium	U	ND	709	4260	ug/kg	92.8	1					
Sodium		52700	9930	35500	ug/kg	92.8	1					
Vanadium		73400	142	709	ug/kg	92.8	1					
Zinc		56200	568	2840	ug/kg	92.8	1					
Antimony	U	ND	4680	28400	ug/kg	92.8	10	TXT1	12/03/19	1925	1942808	3
Potassium		1760000	90800	355000	ug/kg	92.8	10					
Thallium	U	ND	7090	28400	ug/kg	92.8	10					
Silver	U	ND	1420	7090	ug/kg	92.8	10	TXT1	12/04/19	1144	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		45.6	2.91	20.4	ug/kg	95.1	2	PRB	12/08/19	1709	1942804	5
Uranium-238		3400	19.2	58.2	ug/kg	95.1	2					
Uranium-234	U	ND	2.91	14.5	ug/kg	95.1	2	PRB	12/09/19	1431	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		286	13.5	37.5	mg/kg	49.0	10	AXH3	11/26/19	0753	1942616	7

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Certificate of Analysis

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-31 0-6"
Sample ID: 497413006

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"	Project: WNUC01519
Sample ID: 497413007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 25%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		3.07	0.442	1.30	mg/kg	9.76	1	LXA2	11/23/19	2216	1942542	1
Nitrate-N	U	ND	0.429	1.30	mg/kg	9.76	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15500000	8710	25600	ug/kg	96.2	1	TXT1	12/03/19	1934	1942808	2
Arsenic	J	2850	641	3840	ug/kg	96.2	1					
Barium		239000	128	641	ug/kg	96.2	1					
Beryllium		1670	128	641	ug/kg	96.2	1					
Cadmium	U	ND	128	641	ug/kg	96.2	1					
Calcium		679000	10300	32000	ug/kg	96.2	1					
Chromium		22800	192	1280	ug/kg	96.2	1					
Cobalt		16400	192	641	ug/kg	96.2	1					
Copper		17300	384	2560	ug/kg	96.2	1					
Iron		30000000	10300	32000	ug/kg	96.2	1					
Lead		14100	423	2560	ug/kg	96.2	1					
Magnesium		3110000	10900	38400	ug/kg	96.2	1					
Manganese		1090000	256	1280	ug/kg	96.2	1					
Nickel		10700	192	641	ug/kg	96.2	1					
Selenium	U	ND	641	3840	ug/kg	96.2	1					
Sodium		52600	8970	32000	ug/kg	96.2	1					
Vanadium		61900	128	641	ug/kg	96.2	1					
Zinc		45900	513	2560	ug/kg	96.2	1					
Antimony	U	ND	4230	25600	ug/kg	96.2	10	TXT1	12/03/19	1937	1942808	3
Potassium		1610000	82000	320000	ug/kg	96.2	10					
Thallium	U	ND	6410	25600	ug/kg	96.2	10					
Silver	U	ND	1280	6410	ug/kg	96.2	10	TXT1	12/04/19	1146	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		18.1	2.48	17.3	ug/kg	92.9	2	PRB	12/08/19	1711	1942804	5
Uranium-238		2220	16.4	49.5	ug/kg	92.9	2					
Uranium-234	U	ND	2.48	12.4	ug/kg	92.9	2	PRB	12/09/19	1433	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		118	10.0	27.8	mg/kg	41.7	10	AXH3	11/26/19	0753	1942616	7

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"
Sample ID: 497413007

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"	Project: WNUC01519
Sample ID: 497413008	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 53%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		3.88	0.688	2.02	mg/kg	9.52	1	LXA2	11/23/19	2246	1942542	1
Nitrate-N	U	ND	0.668	2.02	mg/kg	9.52	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15200000	14100	41500	ug/kg	97.7	1	TXT1	12/03/19	1940	1942808	2
Antimony	U	ND	685	4150	ug/kg	97.7	1					
Arsenic	J	2470	1040	6230	ug/kg	97.7	1					
Barium		168000	208	1040	ug/kg	97.7	1					
Beryllium		1350	208	1040	ug/kg	97.7	1					
Cadmium	U	ND	208	1040	ug/kg	97.7	1					
Calcium		1140000	16600	51900	ug/kg	97.7	1					
Chromium		22600	311	2080	ug/kg	97.7	1					
Cobalt		9950	311	1040	ug/kg	97.7	1					
Copper		19600	623	4150	ug/kg	97.7	1					
Iron		18600000	16600	51900	ug/kg	97.7	1					
Lead		24100	685	4150	ug/kg	97.7	1					
Magnesium		2440000	17600	62300	ug/kg	97.7	1					
Manganese		410000	415	2080	ug/kg	97.7	1					
Nickel		11200	311	1040	ug/kg	97.7	1					
Potassium		1090000	13300	51900	ug/kg	97.7	1					
Selenium	J	1170	1040	6230	ug/kg	97.7	1					
Sodium		68200	14500	51900	ug/kg	97.7	1					
Vanadium		53500	208	1040	ug/kg	97.7	1					
Zinc		62400	830	4150	ug/kg	97.7	1					
Thallium	U	ND	10400	41500	ug/kg	97.7	10	TXT1	12/03/19	1943	1942808	3
Silver	U	ND	2080	10400	ug/kg	97.7	10	TXT1	12/04/19	1149	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		72.9	3.98	27.9	ug/kg	93.6	2	PRB	12/08/19	1712	1942804	5
Uranium-238		4280	26.3	79.6	ug/kg	93.6	2					
Uranium-234	U	ND	3.98	19.9	ug/kg	93.6	2	PRB	12/09/19	1435	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		480	18.8	52.1	mg/kg	49.0	10	AXH3	11/26/19	0754	1942616	7

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"
Sample ID: 497413008

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 6-12"	Project: WNUC01519
Sample ID: 497413009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 46.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		4.21	0.638	1.88	mg/kg	10.1	1	LXA2	11/23/19	2315	1942542	1
Nitrate-N	U	ND	0.619	1.88	mg/kg	10.1	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		17600000	11700	34400	ug/kg	92.6	1	TXT1	12/03/19	1946	1942808	2
Antimony	U	ND	567	3440	ug/kg	92.6	1					
Arsenic	J	3350	860	5160	ug/kg	92.6	1					
Barium		203000	172	860	ug/kg	92.6	1					
Beryllium		1530	172	860	ug/kg	92.6	1					
Cadmium	U	ND	172	860	ug/kg	92.6	1					
Calcium		742000	13800	43000	ug/kg	92.6	1					
Chromium		25900	258	1720	ug/kg	92.6	1					
Cobalt		10000	258	860	ug/kg	92.6	1					
Copper		22300	516	3440	ug/kg	92.6	1					
Iron		21300000	13800	43000	ug/kg	92.6	1					
Lead		40000	567	3440	ug/kg	92.6	1					
Magnesium		2570000	14600	51600	ug/kg	92.6	1					
Manganese		323000	344	1720	ug/kg	92.6	1					
Nickel		13900	258	860	ug/kg	92.6	1					
Potassium		1090000	11000	43000	ug/kg	92.6	1					
Selenium	J	904	860	5160	ug/kg	92.6	1					
Sodium		89100	12000	43000	ug/kg	92.6	1					
Vanadium		64300	172	860	ug/kg	92.6	1					
Zinc		60700	688	3440	ug/kg	92.6	1					
Thallium	U	ND	8600	34400	ug/kg	92.6	10	TXT1	12/03/19	1949	1942808	3
Silver	U	ND	1720	8600	ug/kg	92.6	10	TXT1	12/04/19	1152	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		195	3.67	25.7	ug/kg	98.8	2	PRB	12/08/19	1714	1942804	5
Uranium-238		8370	24.2	73.4	ug/kg	98.8	2					
Uranium-234	U	ND	3.67	18.4	ug/kg	98.8	2	PRB	12/09/19	1437	1942804	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		576	15.5	43.0	mg/kg	46.3	10	AXH3	11/26/19	0755	1942616	7

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 6-12"
Sample ID: 497413009

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"	Project: WNUC01519
Sample ID: 497413010	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 44.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride	J	1.57	0.593	1.74	mg/kg	9.62	1	LXA2	11/23/19	2345	1942542	1
Nitrate-N	U	ND	0.575	1.74	mg/kg	9.62	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		23200000	12100	35600	ug/kg	98.2	1	TXT1	12/03/19	1952	1942808	2
Arsenic		5430	890	5340	ug/kg	98.2	1					
Barium		167000	178	890	ug/kg	98.2	1					
Beryllium		1830	178	890	ug/kg	98.2	1					
Cadmium	U	ND	178	890	ug/kg	98.2	1					
Calcium		292000	14200	44500	ug/kg	98.2	1					
Chromium		28300	267	1780	ug/kg	98.2	1					
Cobalt		11400	267	890	ug/kg	98.2	1					
Copper		21900	534	3560	ug/kg	98.2	1					
Iron		29300000	14200	44500	ug/kg	98.2	1					
Lead		20100	588	3560	ug/kg	98.2	1					
Magnesium		3060000	15100	53400	ug/kg	98.2	1					
Manganese		295000	356	1780	ug/kg	98.2	1					
Nickel		12900	267	890	ug/kg	98.2	1					
Potassium		1460000	11400	44500	ug/kg	98.2	1					
Selenium	U	ND	890	5340	ug/kg	98.2	1					
Sodium		85700	12500	44500	ug/kg	98.2	1					
Vanadium		81100	178	890	ug/kg	98.2	1					
Zinc		56800	712	3560	ug/kg	98.2	1					
Antimony	U	ND	5880	35600	ug/kg	98.2	10	TXT1	12/03/19	1955	1942808	3
Thallium	U	ND	8900	35600	ug/kg	98.2	10					
Silver	U	ND	1780	8900	ug/kg	98.2	10	TXT1	12/04/19	1155	1942808	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-238		14200	21.8	65.9	ug/kg	90.9	2	PRB	12/08/19	1716	1942804	5
Uranium-234	U	ND	3.30	16.5	ug/kg	90.9	2	PRB	12/09/19	1439	1942804	6
Uranium-235		305	16.5	115	ug/kg	90.9	10	PRB	12/09/19	1040	1942804	7
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		248	16.3	45.3	mg/kg	50.0	10	AXH3	11/26/19	0756	1942616	8

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"
Sample ID: 497413010

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	SW846 3050B/6020B	
8	EPA 350.1 Modified	

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"	Project: WNUC01519
Sample ID: 497413011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 36.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		1.56	0.524	1.54	mg/kg	9.80	1	LXA2	11/24/19	0015	1942542	1
Nitrate-N	U	ND	0.509	1.54	mg/kg	9.80	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		18200000	10300	30300	ug/kg	96.2	1	TXT1	12/05/19	1654	1942810	2
Arsenic	J	3270	756	4540	ug/kg	96.2	1					
Barium		163000	151	756	ug/kg	96.2	1					
Beryllium		2070	151	756	ug/kg	96.2	1					
Cadmium	U	ND	151	756	ug/kg	96.2	1					
Calcium		182000	12100	37800	ug/kg	96.2	1					
Chromium		25600	227	1510	ug/kg	96.2	1					
Cobalt		13800	227	756	ug/kg	96.2	1					
Copper		19300	454	3030	ug/kg	96.2	1					
Iron		29100000	12100	37800	ug/kg	96.2	1					
Lead		11700	499	3030	ug/kg	96.2	1					
Magnesium		3590000	12900	45400	ug/kg	96.2	1					
Manganese		281000	303	1510	ug/kg	96.2	1					
Nickel		12100	227	756	ug/kg	96.2	1					
Potassium		1700000	9680	37800	ug/kg	96.2	1					
Selenium	U	ND	756	4540	ug/kg	96.2	1					
Sodium		59700	10600	37800	ug/kg	96.2	1					
Vanadium		74400	151	756	ug/kg	96.2	1					
Zinc		52600	605	3030	ug/kg	96.2	1					
Antimony	U	ND	4990	30300	ug/kg	96.2	10	TXT1	12/05/19	1706	1942810	3
Silver	U	ND	1510	7560	ug/kg	96.2	10					
Thallium	U	ND	7560	30300	ug/kg	96.2	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		21.8	2.94	20.5	ug/kg	93.3	2	PRB	12/08/19	1724	1942806	4
Uranium-238		2750	19.4	58.7	ug/kg	93.3	2					
Uranium-234	U	ND	2.94	14.7	ug/kg	93.3	2	PRB	12/08/19	2348	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		117	1.14	3.17	mg/kg	40.3	1	AXH3	11/26/19	0731	1942616	6

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"
Sample ID: 497413011

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"	Project: WNUC01519
Sample ID: 497413012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 28.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		6.63	0.497	1.46	mg/kg	10.4	1	LXA2	11/24/19	0144	1942542	1
Nitrate-N	J	1.17	0.482	1.46	mg/kg	10.4	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15500000	9270	27300	ug/kg	96.9	1	TXT1	12/05/19	1728	1942810	2
Antimony	U	ND	450	2730	ug/kg	96.9	1					
Arsenic	J	3140	682	4090	ug/kg	96.9	1					
Barium		135000	136	682	ug/kg	96.9	1					
Beryllium		1630	136	682	ug/kg	96.9	1					
Cadmium	U	ND	136	682	ug/kg	96.9	1					
Calcium		150000	10900	34100	ug/kg	96.9	1					
Chromium		23400	204	1360	ug/kg	96.9	1					
Cobalt		6840	204	682	ug/kg	96.9	1					
Copper		12900	409	2730	ug/kg	96.9	1					
Iron		16700000	10900	34100	ug/kg	96.9	1					
Lead		11800	450	2730	ug/kg	96.9	1					
Magnesium		1370000	11600	40900	ug/kg	96.9	1					
Manganese		176000	273	1360	ug/kg	96.9	1					
Nickel		7210	204	682	ug/kg	96.9	1					
Potassium		443000	8720	34100	ug/kg	96.9	1					
Selenium	U	ND	682	4090	ug/kg	96.9	1					
Sodium		48800	9540	34100	ug/kg	96.9	1					
Vanadium		56400	136	682	ug/kg	96.9	1					
Zinc		27600	545	2730	ug/kg	96.9	1					
Silver	U	ND	1360	6820	ug/kg	96.9	10	TXT1	12/05/19	1731	1942810	3
Thallium	U	ND	6820	27300	ug/kg	96.9	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	16.5	2.81	19.7	ug/kg	100	2	PRB	12/08/19	1736	1942806	4
Uranium-238		2230	18.6	56.3	ug/kg	100	2					
Uranium-234	U	ND	2.81	14.1	ug/kg	100	2	PRB	12/09/19	0000	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		67.3	1.09	3.03	mg/kg	43.1	1	AXH3	11/26/19	0738	1942616	6

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"
Sample ID: 497413012

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-34 0-6"	Project:	WNUC01519
Sample ID:	497413013	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	21-NOV-19 16:10		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	47%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		2.20	0.658	1.93	mg/kg	10.3	1	LXA2	11/24/19	0214	1942542	1
Nitrate-N	U	ND	0.638	1.93	mg/kg	10.3	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		23600000	12200	35900	ug/kg	95.2	1	TXT1	12/05/19	1733	1942810	2
Antimony	U	ND	593	3590	ug/kg	95.2	1					
Arsenic	J	4410	898	5390	ug/kg	95.2	1					
Barium		174000	180	898	ug/kg	95.2	1					
Beryllium		1960	180	898	ug/kg	95.2	1					
Cadmium	U	ND	180	898	ug/kg	95.2	1					
Calcium		843000	14400	44900	ug/kg	95.2	1					
Chromium		28700	269	1800	ug/kg	95.2	1					
Cobalt		15900	269	898	ug/kg	95.2	1					
Copper		26300	539	3590	ug/kg	95.2	1					
Iron		32800000	14400	44900	ug/kg	95.2	1					
Lead		31300	593	3590	ug/kg	95.2	1					
Magnesium		3110000	15300	53900	ug/kg	95.2	1					
Manganese		906000	359	1800	ug/kg	95.2	1					
Nickel		13200	269	898	ug/kg	95.2	1					
Potassium		1320000	11500	44900	ug/kg	95.2	1					
Selenium	J	1050	898	5390	ug/kg	95.2	1					
Sodium		64900	12600	44900	ug/kg	95.2	1					
Vanadium		86100	180	898	ug/kg	95.2	1					
Zinc		56500	718	3590	ug/kg	95.2	1					
Silver	U	ND	1800	8980	ug/kg	95.2	10	TXT1	12/05/19	1736	1942810	3
Thallium	U	ND	8980	35900	ug/kg	95.2	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		44.9	3.52	24.6	ug/kg	93.3	2	PRB	12/08/19	1738	1942806	4
Uranium-238		3650	23.2	70.4	ug/kg	93.3	2					
Uranium-234	U	ND	3.52	17.6	ug/kg	93.3	2	PRB	12/09/19	0002	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		397	9.43	26.2	mg/kg	27.8	10	AXH3	11/26/19	0757	1942616	6

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Certificate of Analysis

Report Date: December 9, 2019

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

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

Client Sample ID: SED-34 0-6"
Sample ID: 497413013

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"	Project: WNUC01519
Sample ID: 497413014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:15	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 40.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		4.26	0.585	1.72	mg/kg	10.2	1	LXA2	11/24/19	0244	1942542	1
Nitrate-N	U	ND	0.568	1.72	mg/kg	10.2	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		24200000	11100	32800	ug/kg	97.5	1	TXT1	12/05/19	1739	1942810	2
Arsenic	J	4440	820	4920	ug/kg	97.5	1					
Barium		170000	164	820	ug/kg	97.5	1					
Beryllium		2700	164	820	ug/kg	97.5	1					
Cadmium	U	ND	164	820	ug/kg	97.5	1					
Calcium		762000	13100	41000	ug/kg	97.5	1					
Chromium		32700	246	1640	ug/kg	97.5	1					
Cobalt		17500	246	820	ug/kg	97.5	1					
Copper		24800	492	3280	ug/kg	97.5	1					
Iron		32200000	13100	41000	ug/kg	97.5	1					
Lead		22300	541	3280	ug/kg	97.5	1					
Magnesium		4000000	13900	49200	ug/kg	97.5	1					
Manganese		1020000	328	1640	ug/kg	97.5	1					
Nickel		14200	246	820	ug/kg	97.5	1					
Potassium		1290000	10500	41000	ug/kg	97.5	1					
Selenium	J	1230	820	4920	ug/kg	97.5	1					
Sodium		62500	11500	41000	ug/kg	97.5	1					
Vanadium		89100	164	820	ug/kg	97.5	1					
Zinc		60900	656	3280	ug/kg	97.5	1					
Antimony	U	ND	5410	32800	ug/kg	97.5	10	TXT1	12/05/19	1742	1942810	3
Silver	U	ND	1640	8200	ug/kg	97.5	10					
Thallium	U	ND	8200	32800	ug/kg	97.5	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		36.3	3.27	22.9	ug/kg	97.1	2	PRB	12/08/19	1740	1942806	4
Uranium-238		3770	21.6	65.3	ug/kg	97.1	2					
Uranium-234	U	ND	3.27	16.3	ug/kg	97.1	2	PRB	12/09/19	0004	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		336	12.4	34.5	mg/kg	41.0	10	AXH3	11/26/19	0758	1942616	6

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"
Sample ID: 497413014

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-35 0-6"	Project: WNUC01519
Sample ID: 497413015	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:40	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Nitrate-N	J	1.05	0.492	1.49	mg/kg	9.71	1	LXA2	11/24/19	0413	1942542	1
Fluoride		2.09	0.507	1.49	mg/kg	9.71	1	LXA2	11/26/19	1820	1942542	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		24800000	10200	29900	ug/kg	97.3	1	TXT1	12/05/19	1745	1942810	3
Arsenic	J	3070	747	4480	ug/kg	97.3	1					
Barium		203000	149	747	ug/kg	97.3	1					
Beryllium		2050	149	747	ug/kg	97.3	1					
Cadmium	U	ND	149	747	ug/kg	97.3	1					
Calcium		490000	11900	37300	ug/kg	97.3	1					
Chromium		33500	224	1490	ug/kg	97.3	1					
Cobalt		17400	224	747	ug/kg	97.3	1					
Copper		23200	448	2990	ug/kg	97.3	1					
Iron		30300000	11900	37300	ug/kg	97.3	1					
Lead		12200	493	2990	ug/kg	97.3	1					
Magnesium		4450000	12700	44800	ug/kg	97.3	1					
Manganese		461000	299	1490	ug/kg	97.3	1					
Nickel		14700	224	747	ug/kg	97.3	1					
Potassium		2130000	9560	37300	ug/kg	97.3	1					
Selenium	U	ND	747	4480	ug/kg	97.3	1					
Sodium		59200	10500	37300	ug/kg	97.3	1					
Vanadium		74100	149	747	ug/kg	97.3	1					
Zinc		53100	597	2990	ug/kg	97.3	1					
Antimony	U	ND	4930	29900	ug/kg	97.3	10	TXT1	12/05/19	1748	1942810	4
Silver	U	ND	1490	7470	ug/kg	97.3	10					
Thallium	U	ND	7470	29900	ug/kg	97.3	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		36.8	2.81	19.6	ug/kg	91.4	2	PRB	12/08/19	1741	1942806	5
Uranium-238		3920	18.5	56.1	ug/kg	91.4	2					
Uranium-234	U	ND	2.81	14.0	ug/kg	91.4	2	PRB	12/09/19	0006	1942806	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		158	10.8	30.0	mg/kg	39.1	10	AXH3	11/26/19	0759	1942616	7

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-35 0-6"
Sample ID: 497413015

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 9056A		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-35 6-12"	Project: WNUC01519
Sample ID: 497413016	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:45	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 29.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Nitrate-N	J	1.03	0.420	1.27	mg/kg	9.01	1	LXA2	11/24/19	0443	1942542	1
Fluoride		4.29	0.433	1.27	mg/kg	9.01	1	LXA2	11/26/19	1850	1942542	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		22100000	9530	28000	ug/kg	99.2	1	TXT1	12/05/19	1751	1942810	3
Arsenic	J	3650	701	4200	ug/kg	99.2	1					
Barium		178000	140	701	ug/kg	99.2	1					
Beryllium		2380	140	701	ug/kg	99.2	1					
Cadmium	U	ND	140	701	ug/kg	99.2	1					
Calcium		542000	11200	35000	ug/kg	99.2	1					
Chromium		27300	210	1400	ug/kg	99.2	1					
Cobalt		19100	210	701	ug/kg	99.2	1					
Copper		24300	420	2800	ug/kg	99.2	1					
Iron		35600000	11200	35000	ug/kg	99.2	1					
Lead		13600	462	2800	ug/kg	99.2	1					
Magnesium		4410000	11900	42000	ug/kg	99.2	1					
Manganese		819000	280	1400	ug/kg	99.2	1					
Nickel		13700	210	701	ug/kg	99.2	1					
Potassium		2050000	8970	35000	ug/kg	99.2	1					
Selenium	U	ND	701	4200	ug/kg	99.2	1					
Sodium		58900	9810	35000	ug/kg	99.2	1					
Vanadium		82100	140	701	ug/kg	99.2	1					
Zinc		51300	560	2800	ug/kg	99.2	1					
Antimony	U	ND	4620	28000	ug/kg	99.2	10	TXT1	12/05/19	1754	1942810	4
Silver	U	ND	1400	7010	ug/kg	99.2	10					
Thallium	U	ND	7010	28000	ug/kg	99.2	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		28.9	2.65	18.5	ug/kg	93.8	2	PRB	12/08/19	1743	1942806	5
Uranium-238		3630	17.5	53.0	ug/kg	93.8	2					
Uranium-234	U	ND	2.65	13.2	ug/kg	93.8	2	PRB	12/09/19	0008	1942806	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		80.1	1.22	3.39	mg/kg	48.1	1	AXH3	11/26/19	0742	1942616	7

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-35 6-12"
Sample ID: 497413016

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 9056A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-36 0-6"	Project: WNUC01519
Sample ID: 497413017	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 33.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride	U	ND	0.489	1.44	mg/kg	9.62	1	LXA2	11/24/19	0513	1942542	1
Nitrate-N	U	ND	0.474	1.44	mg/kg	9.62	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15300000	9830	28900	ug/kg	96.7	1	TXT1	12/05/19	1804	1942810	2
Antimony	U	ND	477	2890	ug/kg	96.7	1					
Arsenic	J	2900	723	4340	ug/kg	96.7	1					
Barium		106000	145	723	ug/kg	96.7	1					
Beryllium		1080	145	723	ug/kg	96.7	1					
Cadmium	U	ND	145	723	ug/kg	96.7	1					
Calcium		256000	11600	36100	ug/kg	96.7	1					
Chromium		19300	217	1450	ug/kg	96.7	1					
Cobalt		9080	217	723	ug/kg	96.7	1					
Copper		14900	434	2890	ug/kg	96.7	1					
Iron		22000000	11600	36100	ug/kg	96.7	1					
Lead		17500	477	2890	ug/kg	96.7	1					
Magnesium		2320000	12300	43400	ug/kg	96.7	1					
Manganese		260000	289	1450	ug/kg	96.7	1					
Nickel		8870	217	723	ug/kg	96.7	1					
Potassium		1200000	9250	36100	ug/kg	96.7	1					
Selenium	U	ND	723	4340	ug/kg	96.7	1					
Sodium		50900	10100	36100	ug/kg	96.7	1					
Vanadium		50300	145	723	ug/kg	96.7	1					
Zinc		39000	578	2890	ug/kg	96.7	1					
Silver	U	ND	1450	7230	ug/kg	96.7	10	TXT1	12/05/19	1807	1942810	3
Thallium	U	ND	7230	28900	ug/kg	96.7	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		70.2	2.85	19.9	ug/kg	95.2	2	PRB	12/08/19	1745	1942806	4
Uranium-238		3970	18.8	57.0	ug/kg	95.2	2					
Uranium-234	U	ND	2.85	14.2	ug/kg	95.2	2	PRB	12/09/19	0010	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		153	8.85	24.6	mg/kg	32.9	10	AXH3	11/26/19	0803	1942616	6

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Address : PO Drawer R

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

Client Sample ID: SED-36 0-6"
Sample ID: 497413017

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"	Project: WNUC01519
Sample ID: 497413018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 31%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride	U	ND	0.450	1.32	mg/kg	9.13	1	LXA2	11/24/19	0543	1942542	1
Nitrate-N	U	ND	0.437	1.32	mg/kg	9.13	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		16100000	9150	26900	ug/kg	92.8	1	TXT1	12/05/19	1810	1942810	2
Arsenic	J	3850	673	4040	ug/kg	92.8	1					
Barium		123000	135	673	ug/kg	92.8	1					
Beryllium		1430	135	673	ug/kg	92.8	1					
Cadmium	U	ND	135	673	ug/kg	92.8	1					
Calcium		158000	10800	33600	ug/kg	92.8	1					
Chromium		19700	202	1350	ug/kg	92.8	1					
Cobalt		11700	202	673	ug/kg	92.8	1					
Copper		17100	404	2690	ug/kg	92.8	1					
Iron		30400000	10800	33600	ug/kg	92.8	1					
Lead		20500	444	2690	ug/kg	92.8	1					
Magnesium		2840000	11400	40400	ug/kg	92.8	1					
Manganese		322000	269	1350	ug/kg	92.8	1					
Nickel		9480	202	673	ug/kg	92.8	1					
Potassium		1400000	8610	33600	ug/kg	92.8	1					
Selenium	U	ND	673	4040	ug/kg	92.8	1					
Sodium		57900	9420	33600	ug/kg	92.8	1					
Vanadium		60200	135	673	ug/kg	92.8	1					
Zinc		40700	538	2690	ug/kg	92.8	1					
Antimony	U	ND	4440	26900	ug/kg	92.8	10	TXT1	12/05/19	1813	1942810	3
Silver	U	ND	1350	6730	ug/kg	92.8	10					
Thallium	U	ND	6730	26900	ug/kg	92.8	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		19.1	2.71	18.9	ug/kg	93.3	2	PRB	12/08/19	1746	1942806	4
Uranium-238		1990	17.9	54.1	ug/kg	93.3	2					
Uranium-234	U	ND	2.71	13.5	ug/kg	93.3	2	PRB	12/09/19	0012	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		99.1	1.33	3.70	mg/kg	51.0	1	AXH3	11/26/19	0744	1942616	6

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"
Sample ID: 497413018

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"	Project: WNUC01519
Sample ID: 497413019	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:20	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 41.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Nitrate-N	U	ND	0.519	1.57	mg/kg	9.22	1	LXA2	11/24/19	0613	1942542	1
Fluoride	J	1.35	0.534	1.57	mg/kg	9.22	1	LXA2	11/26/19	1919	1942542	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		14800000	11100	32700	ug/kg	95.8	1	TXT1	12/05/19	1816	1942810	3
Antimony	U	ND	539	3270	ug/kg	95.8	1					
Arsenic	J	3340	817	4900	ug/kg	95.8	1					
Barium		122000	163	817	ug/kg	95.8	1					
Beryllium		1060	163	817	ug/kg	95.8	1					
Cadmium	U	ND	163	817	ug/kg	95.8	1					
Calcium		394000	13100	40800	ug/kg	95.8	1					
Chromium		18500	245	1630	ug/kg	95.8	1					
Cobalt		6860	245	817	ug/kg	95.8	1					
Copper		14700	490	3270	ug/kg	95.8	1					
Iron		20500000	13100	40800	ug/kg	95.8	1					
Lead		30100	539	3270	ug/kg	95.8	1					
Magnesium		2010000	13900	49000	ug/kg	95.8	1					
Manganese		215000	327	1630	ug/kg	95.8	1					
Nickel		8540	245	817	ug/kg	95.8	1					
Potassium		1050000	10500	40800	ug/kg	95.8	1					
Selenium	J	899	817	4900	ug/kg	95.8	1					
Sodium		47000	11400	40800	ug/kg	95.8	1					
Vanadium		48500	163	817	ug/kg	95.8	1					
Zinc		37200	653	3270	ug/kg	95.8	1					
Silver	U	ND	1630	8170	ug/kg	95.8	10	TXT1	12/05/19	1819	1942810	4
Thallium	U	ND	8170	32700	ug/kg	95.8	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		102	3.19	22.3	ug/kg	93.5	2	PRB	12/08/19	1748	1942806	5
Uranium-238		4850	21.0	63.8	ug/kg	93.5	2					
Uranium-234	U	ND	3.19	15.9	ug/kg	93.5	2	PRB	12/09/19	0014	1942806	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		451	13.2	36.8	mg/kg	43.1	10	AXH3	11/26/19	0804	1942616	7

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Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"
Sample ID: 497413019

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 9056A		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"	Project: WNUC01519
Sample ID: 497413020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Fluoride		1.60	0.509	1.50	mg/kg	9.80	1	CH5	11/30/19	0112	1944127	1
Nitrate-N	U	ND	0.494	1.50	mg/kg	9.80	1					
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		18700000	9610	28300	ug/kg	92.4	1	TXT1	12/05/19	1822	1942810	2
Arsenic	J	3700	706	4240	ug/kg	92.4	1					
Barium		134000	141	706	ug/kg	92.4	1					
Beryllium		1380	141	706	ug/kg	92.4	1					
Cadmium	U	ND	141	706	ug/kg	92.4	1					
Calcium		346000	11300	35300	ug/kg	92.4	1					
Chromium		22600	212	1410	ug/kg	92.4	1					
Cobalt		8530	212	706	ug/kg	92.4	1					
Copper		18200	424	2830	ug/kg	92.4	1					
Iron		25700000	11300	35300	ug/kg	92.4	1					
Lead		20700	466	2830	ug/kg	92.4	1					
Magnesium		2560000	12000	42400	ug/kg	92.4	1					
Manganese		219000	283	1410	ug/kg	92.4	1					
Nickel		10000	212	706	ug/kg	92.4	1					
Potassium		1130000	9040	35300	ug/kg	92.4	1					
Selenium	U	ND	706	4240	ug/kg	92.4	1					
Sodium		51000	9890	35300	ug/kg	92.4	1					
Vanadium		67200	141	706	ug/kg	92.4	1					
Zinc		41100	565	2830	ug/kg	92.4	1					
Antimony	U	ND	4660	28300	ug/kg	92.4	10	TXT1	12/05/19	1825	1942810	3
Silver	U	ND	1410	7060	ug/kg	92.4	10					
Thallium	U	ND	7060	28300	ug/kg	92.4	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		67.4	2.91	20.3	ug/kg	95.1	2	PRB	12/08/19	1750	1942806	4
Uranium-238		3930	19.2	58.1	ug/kg	95.1	2					
Uranium-234	U	ND	2.91	14.5	ug/kg	95.1	2	PRB	12/09/19	0016	1942806	5
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		127	1.23	3.41	mg/kg	44.6	1	AXH3	11/26/19	0751	1942616	6

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Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"
Sample ID: 497413020

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12" DUP	Project: WNUC01519
Sample ID: 497413021	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"												
Nitrate-N	U	ND	0.517	1.57	mg/kg	10.3	1	LXA2	11/24/19	0712	1942542	1
Fluoride	J	0.858	0.533	1.57	mg/kg	10.3	1	LXA2	11/26/19	1949	1942542	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		19000000	10200	30000	ug/kg	98.6	1	TXT1	12/05/19	1827	1942810	3
Arsenic	J	3880	749	4500	ug/kg	98.6	1					
Barium		142000	150	749	ug/kg	98.6	1					
Beryllium		1500	150	749	ug/kg	98.6	1					
Cadmium	U	ND	150	749	ug/kg	98.6	1					
Calcium		335000	12000	37500	ug/kg	98.6	1					
Chromium		23000	225	1500	ug/kg	98.6	1					
Cobalt		8880	225	749	ug/kg	98.6	1					
Copper		19400	450	3000	ug/kg	98.6	1					
Iron		26800000	12000	37500	ug/kg	98.6	1					
Lead		22000	495	3000	ug/kg	98.6	1					
Magnesium		2640000	12700	45000	ug/kg	98.6	1					
Manganese		230000	300	1500	ug/kg	98.6	1					
Nickel		10200	225	749	ug/kg	98.6	1					
Potassium		1160000	9590	37500	ug/kg	98.6	1					
Selenium	U	ND	749	4500	ug/kg	98.6	1					
Sodium		60200	10500	37500	ug/kg	98.6	1					
Vanadium		67900	150	749	ug/kg	98.6	1					
Zinc		42000	599	3000	ug/kg	98.6	1					
Antimony	U	ND	4950	30000	ug/kg	98.6	10	TXT1	12/05/19	1830	1942810	4
Silver	U	ND	1500	7490	ug/kg	98.6	10					
Thallium	U	ND	7490	30000	ug/kg	98.6	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		31.7	3.00	21.0	ug/kg	98.8	2	PRB	12/08/19	1752	1942806	5
Uranium-238		2910	19.8	60.1	ug/kg	98.8	2					
Uranium-234	U	ND	3.00	15.0	ug/kg	98.8	2	PRB	12/09/19	0018	1942806	6
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		178	6.00	16.7	mg/kg	43.9	5	AXH3	11/26/19	0606	1942607	7

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Certificate of Analysis

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12" DUP
Sample ID: 497413021

Project: WNUC01519
Client ID: WNUC009

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

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0955	1942606
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 9056A		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

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: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 0-6	Project: WNUC01519
Sample ID: 497413001	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:35	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 59.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		6.23	+/-0.633	0.127	0.500	pCi/g			MP2	11/29/19	0814	1942981	1
Uranium-235/236		0.313	+/-0.167	0.125	0.500	pCi/g							
Uranium-238		2.51	+/-0.402	0.0918	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-14.5	+/-19.3	34.3	50.0	pCi/g			JJ3	12/01/19	1716	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			88.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 6-12" Project: WNUC01519
Sample ID: 497413002 Client ID: WNUC009
Matrix: Soil
Collect Date: 20-NOV-19 14:40
Receive Date: 22-NOV-19
Collector: Client
Moisture: 46.9%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.81	+/-0.379	0.168	0.500	pCi/g			MP2	11/29/19	0814	1942981	1
Uranium-235/236		0.208	+/-0.153	0.135	0.500	pCi/g							
Uranium-238		1.55	+/-0.350	0.160	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-5.08	+/-14.2	25.0	50.0	pCi/g			JJ3	12/01/19	1738	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			73.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-29 12-16"	Project: WNUC01519
Sample ID: 497413003	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:45	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 37.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.23	+/-0.311	0.190	0.500	pCi/g			MP2	11/29/19	0814	1942981	1
Uranium-235/236		0.175	+/-0.139	0.129	0.500	pCi/g							
Uranium-238		1.16	+/-0.297	0.140	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-7.35	+/-24.7	43.2	50.0	pCi/g			JJ3	12/01/19	1800	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 0-6"	Project: WNUC01519
Sample ID: 497413004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 09:55	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 52.6%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		5.71	+/-0.616	0.124	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236		0.191	+/-0.132	0.0636	0.500	pCi/g							
Uranium-238		2.51	+/-0.409	0.095	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	2.43	+/-20.2	34.9	50.0	pCi/g			JJ3	12/01/19	1822	1943186	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			66.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"	Project: WNUC01519
Sample ID: 497413005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 56%	

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		1.41	+/-0.347	0.166	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0337	+/-0.0926	0.161	0.500	pCi/g							
Uranium-238		1.28	+/-0.329	0.130	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-12.9	+/-23.4	41.3	50.0	pCi/g			JJ3	12/01/19	1844	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			58.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-31 0-6"	Project: WNUC01519
Sample ID: 497413006	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.81	+/-0.466	0.194	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.0669	+/-0.108	0.168	0.500	pCi/g							
Uranium-238		1.75	+/-0.364	0.118	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.959	+/-17.7	30.6	50.0	pCi/g			JJ3	12/01/19	1906	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"	Project: WNUC01519
Sample ID: 497413007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 25%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.96	+/-0.453	0.140	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.110	+/-0.116	0.144	0.500	pCi/g							
Uranium-238		1.69	+/-0.343	0.108	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-5.17	+/-11.1	19.6	50.0	pCi/g			JJ3	12/01/19	1927	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"	Project: WNUC01519
Sample ID: 497413008	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 53%	

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		3.71	+/-0.531	0.153	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.097	+/-0.118	0.158	0.500	pCi/g							
Uranium-238		2.00	+/-0.391	0.136	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	5.06	+/-16.4	28.1	50.0	pCi/g			JJ3	12/01/19	1949	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-32 6-12"	Project: WNUC01519
Sample ID: 497413009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 46.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		10.0	+/-0.819	0.142	0.500	pCi/g		MP2	11/29/19	0815	1942981		1
Uranium-235/236		0.469	+/-0.201	0.064	0.500	pCi/g							
Uranium-238		3.28	+/-0.469	0.114	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-1.95	+/-14.2	24.8	50.0	pCi/g		JJ3	12/01/19	2011	1943186		2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			82.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.1	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"	Project: WNUC01519
Sample ID: 497413010	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 44.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		5.06	+/-0.577	0.109	0.500	pCi/g		MP2		11/30/19	0948	1942981	1
Uranium-235/236		0.394	+/-0.185	0.101	0.500	pCi/g							
Uranium-238		2.52	+/-0.408	0.112	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-3.08	+/-10.3	18.1	50.0	pCi/g		JJ3		12/01/19	2033	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			79.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"	Project: WNUC01519
Sample ID: 497413011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 36.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.27	+/-0.296	0.131	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.0959	+/-0.103	0.117	0.500	pCi/g							
Uranium-238		1.56	+/-0.325	0.120	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-1.57	+/-10.9	18.9	50.0	pCi/g			JJ3	12/01/19	2054	1943186	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			84.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"	Project: WNUC01519
Sample ID: 497413012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 28.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.06	+/-0.247	0.111	0.500	pCi/g			MP2	12/02/19	1502	1942981	1
Uranium-235/236	U	0.0461	+/-0.0704	0.093	0.500	pCi/g							
Uranium-238		1.09	+/-0.248	0.0825	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-14.2	+/-17.5	31.2	50.0	pCi/g			JJ3	12/01/19	1438	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-34 0-6"	Project: WNUC01519
Sample ID: 497413013	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 47%	

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		3.13	+/-0.437	0.139	0.500	pCi/g			MP2	11/30/19	0948	1942981	1
Uranium-235/236	U	0.131	+/-0.115	0.135	0.500	pCi/g							
Uranium-238		1.81	+/-0.331	0.0862	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-12.1	+/-15.6	27.7	50.0	pCi/g			JJ3	12/01/19	1500	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"	Project: WNUC01519
Sample ID: 497413014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:15	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 40.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.93	+/-0.509	0.188	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0487	+/-0.0958	0.133	0.500	pCi/g							
Uranium-238		1.73	+/-0.397	0.201	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-23.4	+/-23.4	42.0	50.0	pCi/g			JJ3	12/01/19	1522	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-35 0-6"	Project:	WNUC01519
Sample ID:	497413015	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	22-NOV-19 08:40		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	34.9%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.26	+/-0.388	0.129	0.500	pCi/g		MP2		12/04/19	0821	1942981	1
Uranium-235/236		0.179	+/-0.131	0.116	0.500	pCi/g							
Uranium-238		1.59	+/-0.326	0.119	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.83	+/-14.1	24.6	50.0	pCi/g		JJ3		12/01/19	1544	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			99.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-35 6-12"	Project: WNUC01519
Sample ID: 497413016	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:45	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 29.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.59	+/-0.381	0.151	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0433	+/-0.0993	0.158	0.500	pCi/g							
Uranium-238		1.66	+/-0.392	0.178	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-16.4	+/-21.1	37.6	50.0	pCi/g			JJ3	12/01/19	1606	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			46.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-36 0-6"	Project: WNUC01519
Sample ID: 497413017	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 33.1%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		4.40	+/-0.545	0.111	0.500	pCi/g			MP2	11/30/19	0949	1942981	1
Uranium-235/236		0.210	+/-0.141	0.103	0.500	pCi/g							
Uranium-238		2.38	+/-0.401	0.0964	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-12.1	+/-14.3	25.5	50.0	pCi/g			JJ3	12/01/19	1628	1943187	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			78.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"	Project: WNUC01519
Sample ID: 497413018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 31%	

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		1.50	+/-0.270	0.0943	0.500	pCi/g		MP2		11/30/19	0949	1942981	1
Uranium-235/236		0.0881	+/-0.080	0.0734	0.500	pCi/g							
Uranium-238		1.05	+/-0.225	0.0593	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-12	+/-13.3	23.8	50.0	pCi/g		JJ3		12/01/19	1650	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.7	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"	Project: WNUC01519
Sample ID: 497413019	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:20	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 41.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		4.88	+/-0.547	0.116	0.500	pCi/g		MP2		11/30/19	0949	1942981	1
Uranium-235/236		0.254	+/-0.144	0.0587	0.500	pCi/g							
Uranium-238		1.78	+/-0.331	0.0876	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-11.3	+/-13.8	24.6	50.0	pCi/g		JJ3		12/01/19	1712	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			71.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"	Project: WNUC01519
Sample ID: 497413020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.04	+/-0.343	0.118	0.500	pCi/g		MP2		11/30/19	0949	1942981	1
Uranium-235/236		0.149	+/-0.113	0.110	0.500	pCi/g							
Uranium-238		1.62	+/-0.304	0.0892	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-15.2	+/-16.4	29.4	50.0	pCi/g		JJ3		12/01/19	1734	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

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"			81.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12" DUP	Project: WNUC01519
Sample ID: 497413021	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.33	+/-0.437	0.129	0.500	pCi/g			BXA4	12/03/19	0840	1942989	1
Uranium-235/236	U	0.0456	+/-0.0896	0.124	0.500	pCi/g							
Uranium-238		1.38	+/-0.339	0.138	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-23.7	+/-19.7	35.6	50.0	pCi/g			JJ3	12/01/19	1755	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1326	1942870

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

GEL LABORATORIES LLC

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QC Summary

Report Date: December 9, 2019

Page 1 of 22

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

Contact: Ms. Cynthia Logsdon

Workorder: 497413

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1942542										
QC1204440751	497413001	DUP									
Fluoride	J	1.14	J	1.69	mg/kg	39.1	^	(+/-2.33)	LXA2	11/23/19	17:48
Nitrate-N	U	ND	U	ND	mg/kg	N/A					
QC1204440752	497413011	DUP									
Fluoride		1.56	U	ND	mg/kg	200*^		(+/-1.50)		11/24/19	00:45
Nitrate-N	U	ND	U	ND	mg/kg	N/A					
QC1204440753	497413021	DUP									
Fluoride	J	0.858	J	0.615	mg/kg	33	^	(+/-1.50)		11/26/19	20:19
Nitrate-N	U	ND	U	ND	mg/kg	N/A				11/24/19	07:42
QC1204440750	LCS										
Fluoride	25.0			26.7	mg/kg			107 (90%-110%)		11/23/19	17:18
Nitrate-N	25.0			27.5	mg/kg			110 (90%-110%)			
QC1204440749	MB										
Fluoride			U	ND	mg/kg					11/23/19	16:19
Nitrate-N			U	ND	mg/kg						
QC1204440754	497413001	MS									
Fluoride	59.4	J	1.14	23.6	mg/kg			37.7* (75%-125%)		11/23/19	18:17
Nitrate-N	59.4	U	ND	72.2	mg/kg			121 (75%-125%)			

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

QC Summary

Workorder: 497413

Page 2 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1942542										
QC1204440755		497413011	MS								
Fluoride	36.0		1.56		21.4	mg/kg	55 *	(75%-125%)	LXA2	11/24/19	01:15
Nitrate-N	36.0	U	ND		36.8	mg/kg	102	(75%-125%)			
QC1204440756		497413021	MS								
Fluoride	40.8	J	0.858		11.8	mg/kg	26.8 *	(75%-125%)		11/26/19	20:49
Nitrate-N	40.8	U	ND		41.8	mg/kg	102	(75%-125%)		11/24/19	08:12
Batch	1944127										
QC1204444269		497413020	DUP								
Fluoride			1.60		1.91	mg/kg	18 ^	(+/-1.54)	CH5	11/30/19	01:42
Nitrate-N		U	ND	U	ND	mg/kg	N/A				
QC1204444270		497772001	DUP								
Fluoride			5.17		5.25	mg/kg	1.41 ^	(+/-3.64)		11/30/19	03:12
Nitrate-N		U	ND	U	ND	mg/kg	N/A				
QC1204444268		LCS									
Fluoride	24.6				24.7	mg/kg	100	(90%-110%)		11/30/19	00:43
Nitrate-N	24.6				23.9	mg/kg	97.2	(90%-110%)			
QC1204444267		MB									
Fluoride				U	ND	mg/kg				11/30/19	00:13
Nitrate-N				U	ND	mg/kg					
QC1204444271		497413020	MS								
Fluoride	37.9		1.60		15.5	mg/kg	36.7 *	(75%-125%)		11/30/19	02:12

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QC Summary

Workorder: 497413

Page 3 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1944127										
Nitrate-N	37.9	U	ND	35.7	mg/kg		94.2	(75%-125%)	CH5	11/30/19	02:12
QC1204444272	497772001 MS										
Fluoride	90.0		5.17	45.9	mg/kg		45.3*	(75%-125%)		11/30/19	03:42
Nitrate-N	90.0	U	ND	85.4	mg/kg		94.9	(75%-125%)			
Metals Analysis - ICPMS											
Batch	1942804										
QC1204441316	LCS										
Uranium-235	33.6			33.2	ug/kg		98.6	(80%-120%)	PRB	12/08/19	16:48
Uranium-238	4640			4430	ug/kg		95.5	(80%-120%)			
QC1204442597	LCS										
Uranium-234	55.0			54.6	ug/kg		99.3	(80%-120%)		12/09/19	14:09
QC1204441315	MB										
Uranium-234			U	ND	ug/kg					12/09/19	14:07
Uranium-235			U	ND	ug/kg					12/08/19	16:47
Uranium-238			U	ND	ug/kg						
QC1204441317	497413001 MS										
Uranium-235	83.2		86.4	232	ug/kg		175*	(75%-125%)		12/08/19	16:52
Uranium-238	11500		6030	21000	ug/kg		130*	(75%-125%)			
QC1204442638	497413001 MS										
Uranium-234	127	U	ND	145	ug/kg		113	(75%-125%)		12/09/19	14:13

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

QC Summary

Workorder: 497413

Page 4 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1942804										
QC1204441318	497413001	MSD									
Uranium-235	82.1	86.4		186	ug/kg	21.8*	122	(0%-20%)	PRB	12/08/19	16:54
Uranium-238	11300	6030		19300	ug/kg	8.47	117	(0%-20%)			
QC1204442639	497413001	MSD									
Uranium-234	130	U	ND	136	ug/kg	6.16	104	(0%-20%)		12/09/19	14:15
QC1204450273	497413001	PS									
Uranium-235	0.180	0.178		0.384	ug/L		115	(75%-125%)		12/08/19	16:55
Uranium-238	24.8	12.4		40.8	ug/L		114	(75%-125%)			
QC1204441319	497413001	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/09/19	14:17
Uranium-235		0.178	J	0.0307	ug/L	13.6		(0%-20%)		12/08/19	16:57
Uranium-238		12.4		2.13	ug/L	14.1		(0%-20%)			
Batch	1942806										
QC1204441321	LCS										
Uranium-235	33.6			32.9	ug/kg		97.8	(80%-120%)	PRB	12/08/19	17:23
Uranium-238	4640			4260	ug/kg		91.8	(80%-120%)			
QC1204442640	LCS										
Uranium-234	51.6			50.5	ug/kg		97.8	(80%-120%)		12/08/19	23:46
QC1204441320	MB										
Uranium-234			U	ND	ug/kg					12/08/19	23:44
Uranium-235			U	ND	ug/kg					12/08/19	17:21

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

QC Summary

Workorder: 497413

Page 5 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1942806										
Uranium-238			U	ND	ug/kg				PRB	12/08/19	17:21
QC1204441322	497413011	MS									
Uranium-235	55.3	21.8		85.6	ug/kg		115	(75%-125%)		12/08/19	17:26
Uranium-238	7630	2750		11400	ug/kg		113	(75%-125%)			
QC1204442641	497413011	MS									
Uranium-234	79.5	U	ND	96.6	ug/kg		121	(75%-125%)		12/08/19	23:50
QC1204441323	497413011	MSD									
Uranium-235	52.7	21.8		83.2	ug/kg	2.88	116	(0%-20%)		12/08/19	17:28
Uranium-238	7270	2750		11100	ug/kg	2.01	115	(0%-20%)			
QC1204442642	497413011	MSD									
Uranium-234	82.7	U	ND	96.3	ug/kg	0.345	116	(0%-20%)		12/08/19	23:52
QC1204441324	497413011	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/08/19	23:54
Uranium-235		0.0744	J	0.0138	ug/L	7.26		(0%-20%)		12/08/19	17:31
Uranium-238		9.37		1.67	ug/L	11		(0%-20%)			
Metals Analysis-ICP											
Batch	1942808										
QC1204441326	LCS										
Aluminum	478000			466000	ug/kg		97.4	(80%-120%)	TXT1	12/03/19	18:16
Antimony	47800			46300	ug/kg		96.8	(80%-120%)			

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

QC Summary

Workorder: 497413

Page 6 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Arsenic	47800			44300	ug/kg		92.6	(80%-120%)	TXT1	12/03/19	18:16
Barium	47800			46900	ug/kg		98.2	(80%-120%)			
Beryllium	47800			47900	ug/kg		100	(80%-120%)			
Cadmium	47800			46400	ug/kg		97.1	(80%-120%)			
Calcium	478000			473000	ug/kg		99	(80%-120%)			
Chromium	47800			46500	ug/kg		97.2	(80%-120%)			
Cobalt	47800			47000	ug/kg		98.4	(80%-120%)			
Copper	47800			47800	ug/kg		100	(80%-120%)			
Iron	478000			467000	ug/kg		97.7	(80%-120%)			
Lead	47800			46500	ug/kg		97.3	(80%-120%)			
Magnesium	478000			474000	ug/kg		99.1	(80%-120%)			
Manganese	47800			46400	ug/kg		97	(80%-120%)			
Nickel	47800			46700	ug/kg		97.7	(80%-120%)			
Potassium	478000			464000	ug/kg		97	(80%-120%)			
Selenium	47800			44600	ug/kg		93.4	(80%-120%)			

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

QC Summary

Workorder: 497413

Page 7 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Silver	9560			9360	ug/kg		97.9	(80%-120%)	TXT1	12/04/19	11:11
Sodium	478000			460000	ug/kg		96.2	(80%-120%)		12/03/19	18:16
Thallium	47800			46700	ug/kg		97.8	(80%-120%)			
Vanadium	47800			47000	ug/kg		98.4	(80%-120%)			
Zinc	47800			45600	ug/kg		95.5	(80%-120%)			
QC1204441325	MB										
Aluminum			U	ND	ug/kg					12/03/19	18:12
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 8 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Iron			U	ND	ug/kg				TXT1	12/03/19	18:12
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						
Manganese			U	ND	ug/kg						
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg					12/04/19	11:07
Sodium			J	7720	ug/kg					12/03/19	18:12
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204441327 497413001 MS											
Aluminum	1160000			25900000	44300000	ug/kg		N/A (75%-125%)		12/03/19	18:28
Antimony	116000	U		ND	98500	ug/kg		84.7 (75%-125%)			
Arsenic	116000	J		4240	104000	ug/kg		86 (75%-125%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 9 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Barium	116000	207000		336000	ug/kg		110	(75%-125%)	TXT1	12/03/19	18:28
Beryllium	116000	1830		112000	ug/kg		94.6	(75%-125%)			
Cadmium	116000	U	ND	106000	ug/kg		90.9	(75%-125%)			
Calcium	1160000	809000		2010000	ug/kg		103	(75%-125%)			
Chromium	116000	33800		144000	ug/kg		95	(75%-125%)			
Cobalt	116000	8360		116000	ug/kg		93	(75%-125%)			
Copper	116000	27900		146000	ug/kg		101	(75%-125%)			
Iron	1160000	17600000		21800000	ug/kg		N/A	(75%-125%)			
Lead	116000	28200		137000	ug/kg		93.6	(75%-125%)			
Magnesium	1160000	2800000		4070000	ug/kg		110	(75%-125%)			
Manganese	116000	223000		346000	ug/kg		106	(75%-125%)			
Nickel	116000	15200		128000	ug/kg		96.7	(75%-125%)			
Potassium	1160000	1400000		2580000	ug/kg		101	(75%-125%)			
Selenium	116000	U	ND	102000	ug/kg		87.6	(75%-125%)			
Silver	23200	U	ND	21300	ug/kg		91.7	(75%-125%)		12/04/19	11:17

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 10 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Sodium	1160000	125000		1190000	ug/kg		91.7	(75%-125%)	TXT1	12/03/19	18:28
Thallium	116000	U	ND	104000	ug/kg		89.3	(75%-125%)		12/03/19	18:40
Vanadium	116000	85600		198000	ug/kg		97	(75%-125%)		12/03/19	18:28
Zinc	116000	69100		187000	ug/kg		102	(75%-125%)			
QC1204441328	497413001	MSD									
Aluminum	1200000	25900000		48400000	ug/kg	8.76	N/A	(0%-20%)		12/03/19	18:31
Antimony	120000	U	ND	95500	ug/kg	3.05	79.4	(0%-20%)			
Arsenic	120000	J	4240	105000	ug/kg	0.499	83.5	(0%-20%)			
Barium	120000	207000		335000	ug/kg	0.0602	107	(0%-20%)			
Beryllium	120000	1830		112000	ug/kg	0.232	91.6	(0%-20%)			
Cadmium	120000	U	ND	105000	ug/kg	0.753	87.2	(0%-20%)			
Calcium	1200000	809000		1790000	ug/kg	11.7	81.4	(0%-20%)			
Chromium	120000	33800		149000	ug/kg	3.42	96	(0%-20%)			
Cobalt	120000	8360		117000	ug/kg	0.229	90.1	(0%-20%)			
Copper	120000	27900		149000	ug/kg	2.43	101	(0%-20%)			
Iron	1200000	17600000		21100000	ug/kg	3.69	N/A	(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 11 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Lead	120000	28200		139000	ug/kg	1.59	92.3	(0%-20%)	TXT1	12/03/19	18:31
Magnesium	1200000	2800000		4270000	ug/kg	4.6	122	(0%-20%)			
Manganese	120000	223000		322000	ug/kg	7.11	82.6	(0%-20%)			
Nickel	120000	15200		129000	ug/kg	1.27	94.8	(0%-20%)			
Potassium	1200000	1400000		2630000	ug/kg	1.84	102	(0%-20%)			
Selenium	120000	U	ND	103000	ug/kg	0.677	85.2	(0%-20%)			
Silver	24100	U	ND	20500	ug/kg	4	85.2	(0%-20%)		12/04/19	11:20
Sodium	1200000	125000		1190000	ug/kg	0.0989	88.5	(0%-20%)		12/03/19	18:31
Thallium	120000	U	ND	100000	ug/kg	3.27	83.5	(0%-20%)		12/03/19	18:43
Vanadium	120000	85600		205000	ug/kg	3.45	99.5	(0%-20%)		12/03/19	18:31
Zinc	120000	69100		191000	ug/kg	1.83	101	(0%-20%)			
QC1204441329 497413001 SDILT											
Aluminum		107000		23300	ug/L	9.2		(0%-20%)		12/03/19	18:35
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	17.5	U	ND	ug/L	N/A	(0%-20%)			
Barium		855		185	ug/L	8.46		(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 12 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Beryllium		7.53	J	1.62	ug/L	7.77		(0%-20%)	TXT1	12/03/19	18:35
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium		3340		718	ug/L	7.58		(0%-20%)			
Chromium		140		30.4	ug/L	9.05		(0%-20%)			
Cobalt		34.5		7.97	ug/L	15.5		(0%-20%)			
Copper		115		23.7	ug/L	2.96		(0%-20%)			
Iron		72600		15700	ug/L	7.99		(0%-20%)			
Lead		116		25.3	ug/L	8.86		(0%-20%)			
Magnesium		11600		2520	ug/L	9.11		(0%-20%)			
Manganese		920		201	ug/L	9.07		(0%-20%)			
Nickel		62.9		13.9	ug/L	10.3		(0%-20%)			
Potassium		5790		1250	ug/L	7.96		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	11:22
Sodium		514	J	151	ug/L	46.8		(0%-20%)		12/03/19	18:35

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 13 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942808										
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)	TXT1	12/03/19	18:49
Vanadium		353		74.9	ug/L	6.09		(0%-20%)		12/03/19	18:35
Zinc		285		63.3	ug/L	11.1		(0%-20%)			
<hr/>											
Batch	1942810										
QC1204441331	LCS										
Aluminum	469000			472000	ug/kg		101	(80%-120%)	TXT1	12/05/19	16:44
Antimony	46900			45700	ug/kg		97.5	(80%-120%)			
Arsenic	46900			44500	ug/kg		94.8	(80%-120%)			
Barium	46900			46400	ug/kg		98.9	(80%-120%)			
Beryllium	46900			47600	ug/kg		102	(80%-120%)			
Cadmium	46900			45800	ug/kg		97.6	(80%-120%)			
Calcium	469000			473000	ug/kg		101	(80%-120%)			
Chromium	46900			46200	ug/kg		98.6	(80%-120%)			
Cobalt	46900			46300	ug/kg		98.8	(80%-120%)			
Copper	46900			47700	ug/kg		102	(80%-120%)			
Iron	469000			468000	ug/kg		99.8	(80%-120%)			
Lead	46900			45000	ug/kg		96	(80%-120%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 14 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Magnesium	469000			466000	ug/kg		99.3	(80%-120%)	TXT1	12/05/19	16:44
Manganese	46900			46400	ug/kg		99	(80%-120%)			
Nickel	46900			46400	ug/kg		98.9	(80%-120%)			
Potassium	469000			479000	ug/kg		102	(80%-120%)			
Selenium	46900			43900	ug/kg		93.6	(80%-120%)			
Silver	9380			9250	ug/kg		98.6	(80%-120%)			
Sodium	469000			456000	ug/kg		97.1	(80%-120%)			
Thallium	46900			46000	ug/kg		98.2	(80%-120%)			
Vanadium	46900			46700	ug/kg		99.5	(80%-120%)			
Zinc	46900			45300	ug/kg		96.6	(80%-120%)			
QC1204441330	MB										
Aluminum			U	ND	ug/kg					12/05/19	16:40
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 15 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Cadmium			U	ND	ug/kg				TXT1	12/05/19	16:40
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						
Manganese			U	ND	ug/kg						
Nickel			U	ND	ug/kg						
Potassium			J	7140	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Sodium			U	ND	ug/kg						
Thallium			U	ND	ug/kg						

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 16 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Vanadium			U	ND	ug/kg				TXT1	12/05/19	16:40
Zinc			U	ND	ug/kg						
QC1204441332 497413011 MS											
Aluminum	771000	18200000		25500000	ug/kg		N/A	(75%-125%)		12/05/19	16:57
Antimony	77100	U	ND	65900	ug/kg		85.4	(75%-125%)		12/05/19	17:09
Arsenic	77100	J	3270	66500	ug/kg		82	(75%-125%)		12/05/19	16:57
Barium	77100		163000	228000	ug/kg		85.1	(75%-125%)			
Beryllium	77100		2070	70500	ug/kg		88.8	(75%-125%)			
Cadmium	77100	U	ND	65300	ug/kg		84.7	(75%-125%)			
Calcium	771000		182000	869000	ug/kg		89.1	(75%-125%)			
Chromium	77100		25600	93600	ug/kg		88.2	(75%-125%)			
Cobalt	77100		13800	80200	ug/kg		86.1	(75%-125%)			
Copper	77100		19300	92600	ug/kg		95	(75%-125%)			
Iron	771000		29100000	31700000	ug/kg		N/A	(75%-125%)			
Lead	77100		11700	77300	ug/kg		85	(75%-125%)			
Magnesium	771000		3590000	4240000	ug/kg		N/A	(75%-125%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 17 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Manganese	77100	281000		350000	ug/kg		89.2	(75%-125%)	TXT1	12/05/19	16:57
Nickel	77100	12100		80200	ug/kg		88.3	(75%-125%)			
Potassium	771000	1700000		2410000	ug/kg		92.1	(75%-125%)			
Selenium	77100	U	ND	60600	ug/kg		77.8	(75%-125%)			
Silver	15400	U	ND	10200	ug/kg		65.8*	(75%-125%)		12/05/19	17:09
Sodium	771000	59700		742000	ug/kg		88.5	(75%-125%)		12/05/19	16:57
Thallium	77100	U	ND	53900	ug/kg		69.9*	(75%-125%)		12/05/19	17:09
Vanadium	77100	74400		139000	ug/kg		84.2	(75%-125%)		12/05/19	16:57
Zinc	77100	52600		122000	ug/kg		90.2	(75%-125%)			
QC1204441333 497413011 MSD											
Aluminum	727000	18200000		25200000	ug/kg	1.1	N/A	(0%-20%)		12/05/19	16:59
Antimony	72700	U	ND	64500	ug/kg	2.21	88.6	(0%-20%)		12/05/19	17:12
Arsenic	72700	J	3270	63000	ug/kg	5.31	82.2	(0%-20%)		12/05/19	16:59
Barium	72700	163000		219000	ug/kg	4.14	77.5	(0%-20%)			
Beryllium	72700	2070		66700	ug/kg	5.54	88.9	(0%-20%)			
Cadmium	72700	U	ND	61000	ug/kg	6.89	83.9	(0%-20%)			

GEL LABORATORIES LLC

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

QC Summary

Workorder: 497413

Page 18 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Calcium	727000	182000		820000	ug/kg	5.8	87.8	(0%-20%)	TXT1	12/05/19	16:59
Chromium	72700	25600		89100	ug/kg	4.95	87.4	(0%-20%)			
Cobalt	72700	13800		75600	ug/kg	5.95	85	(0%-20%)			
Copper	72700	19300		87500	ug/kg	5.68	93.7	(0%-20%)			
Iron	727000	29100000		29700000	ug/kg	6.36	N/A	(0%-20%)			
Lead	72700	11700		74100	ug/kg	4.24	85.8	(0%-20%)			
Magnesium	727000	3590000		4130000	ug/kg	2.62	N/A	(0%-20%)			
Manganese	72700	281000		330000	ug/kg	5.98	66.7*	(0%-20%)			
Nickel	72700	12100		75600	ug/kg	6	87.3	(0%-20%)			
Potassium	727000	1700000		2320000	ug/kg	3.74	85.5	(0%-20%)			
Selenium	72700	U	ND	57100	ug/kg	5.9	77.7	(0%-20%)			
Silver	14500	U	ND	10200	ug/kg	0.143	69.9*	(0%-20%)		12/05/19	17:12
Sodium	727000	59700		690000	ug/kg	7.27	86.7	(0%-20%)		12/05/19	16:59
Thallium	72700	U	ND	52200	ug/kg	3.24	71.8*	(0%-20%)		12/05/19	17:12
Vanadium	72700	74400		133000	ug/kg	4.64	80.6	(0%-20%)		12/05/19	16:59

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QC Summary

Workorder: 497413

Page 19 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Zinc	72700	52600		117000	ug/kg	4.37	88.5	(0%-20%)	TXT1	12/05/19	16:59
QC1204446774 497413011 PS											
Manganese	500	1860		2270	ug/L		83.2	(75%-125%)		12/05/19	17:02
Silver	100	U	ND	90.6	ug/L		90.6	(75%-125%)		12/05/19	17:15
Thallium	500	U	ND	465	ug/L		93	(75%-125%)			
QC1204441334 497413011 SDILT											
Aluminum		120000		27300	ug/L	13.4		(0%-20%)		12/05/19	17:04
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/05/19	17:18
Arsenic		J	21.6	J	7.39	ug/L	70.8	(0%-20%)		12/05/19	17:04
Barium			1080		242	ug/L	12.5	(0%-20%)			
Beryllium			13.7	J	3.03	ug/L	10.6	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			1200		273	ug/L	13.6	(0%-20%)			
Chromium			169		38.0	ug/L	12.5	(0%-20%)			
Cobalt			91.5		21.0	ug/L	14.8	(0%-20%)			
Copper			128		27.2	ug/L	6.79	(0%-20%)			

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QC Summary

Workorder: 497413

Page 20 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1942810										
Iron		192000		43800	ug/L	13.9		(0%-20%)	TXT1	12/05/19	17:04
Lead		77.3	J	16.7	ug/L	7.73		(0%-20%)			
Magnesium		23700		5380	ug/L	13.5		(0%-20%)			
Manganese		1860		422	ug/L	13.4		(0%-20%)			
Nickel		80.2		18.8	ug/L	17.2		(0%-20%)			
Potassium		11200		2520	ug/L	12		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	17:18
Sodium		395	J	76.1	ug/L	3.59		(0%-20%)		12/05/19	17:04
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	17:18
Vanadium		492		109	ug/L	10.4		(0%-20%)		12/05/19	17:04
Zinc		348		80.0	ug/L	15		(0%-20%)			

Nutrient Analysis

Batch	1942607										
QC1204440862	LCS										
Nitrogen, Ammonia	50.0			48.8	mg/kg		97.6	(90%-110%)	AXH3	11/26/19	05:52
QC1204440863	LCSD										
Nitrogen, Ammonia	50.0			49.1	mg/kg	0.511	98.1	(0%-20%)		11/26/19	05:53

GEL LABORATORIES LLC

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QC Summary

Workorder: 497413

Page 21 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Nutrient Analysis											
Batch	1942607										
QC1204440861	MB										
Nitrogen, Ammonia			J	1.12	mg/kg				AXH3	11/26/19	05:51
<hr/>											
Batch	1942616										
QC1204440875	497413001	DUP									
Nitrogen, Ammonia		455		451	mg/kg	0.803		(0%-20%)	AXH3	11/26/19	07:21
QC1204440876	497413002	DUP									
Nitrogen, Ammonia		287		302	mg/kg	4.86		(0%-20%)		11/26/19	07:33
QC1204440874	LCS										
Nitrogen, Ammonia	50.0			49.9	mg/kg		99.8	(90%-110%)		11/26/19	07:15
QC1204440873	MB										
Nitrogen, Ammonia			J	1.40	mg/kg					11/26/19	07:14
QC1204440877	497413001	MS									
Nitrogen, Ammonia	105	455		608	mg/kg		N/A	(90%-110%)		11/26/19	07:22
QC1204440878	497413002	MS									
Nitrogen, Ammonia	73.6	287		330	mg/kg		57.6*	(90%-110%)		11/26/19	07:34

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- 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

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QC Summary

Report Date: December 9, 2019

Page 1 of 3

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

Workorder: 497413

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<hr/>											
Rad Alpha Spec											
Batch	1942981										
QC1204441750 497413001 DUP											
Uranium-233/234		6.23		5.35	pCi/g	15.3		(0%-20%)	MP2	11/30/19	09:49
	Uncertainty	+/-0.633		+/-0.538							
Uranium-235/236		0.313		0.338	pCi/g	7.6		(0% - 100%)			
	Uncertainty	+/-0.167		+/-0.156							
Uranium-238		2.51		2.63	pCi/g	4.58		(0%-20%)			
	Uncertainty	+/-0.402		+/-0.378							
QC1204441751 LCS											
Uranium-233/234				4.99	pCi/g					11/30/19	09:49
	Uncertainty			+/-0.523							
Uranium-235/236				0.287	pCi/g						
	Uncertainty			+/-0.145							
Uranium-238		5.25		5.45	pCi/g		104	(75%-125%)			
	Uncertainty			+/-0.544							
QC1204441749 MB											
Uranium-233/234			U	-0.046	pCi/g					11/30/19	09:49
	Uncertainty			+/-0.0415							
Uranium-235/236			U	-0.0102	pCi/g						
	Uncertainty			+/-0.045							
Uranium-238			U	-0.0371	pCi/g						
	Uncertainty			+/-0.0422							
<hr/>											
Batch	1942989										
QC1204441776 497413021 DUP											
Uranium-233/234		2.33		2.05	pCi/g	12.9		(0%-20%)	BXA4	12/03/19	08:40
	Uncertainty	+/-0.437		+/-0.387							
Uranium-235/236	U	0.0456	U	0.0182	pCi/g	N/A		N/A			
	Uncertainty	+/-0.0896		+/-0.0814							
Uranium-238		1.38		1.26	pCi/g	9.44		(0%-20%)			
	Uncertainty	+/-0.339		+/-0.302							

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QC Summary

Workorder: 497413

Page 2 of 3

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1942989										
QC1204441777	LCS										
Uranium-233/234				5.19	pCi/g				BXA4	11/27/19	13:18
	Uncertainty			+/-0.627							
Uranium-235/236				0.286	pCi/g						
	Uncertainty			+/-0.171							
Uranium-238	5.19			4.91	pCi/g		94.6	(75%-125%)			
	Uncertainty			+/-0.609							
QC1204441775	MB										
Uranium-233/234			U	0.00276	pCi/g					11/27/19	13:18
	Uncertainty			+/-0.0632							
Uranium-235/236			U	0.00	pCi/g						
	Uncertainty			+/-0.0549							
Uranium-238			U	0.0224	pCi/g						
	Uncertainty			+/-0.0625							
Rad Liquid Scintillation											
Batch	1943186										
QC1204442273	497413002	DUP									
Technetium-99			U	-5.08	pCi/g	N/A			N/A	JJ3	12/01/19 21:38
	Uncertainty			+/-14.2							
QC1204442274	LCS										
Technetium-99				330	pCi/g		92.2	(75%-125%)		12/01/19	22:00
	Uncertainty			+/-17.3							
QC1204442272	MB										
Technetium-99			U	2.22	pCi/g					12/01/19	21:16
	Uncertainty			+/-9.37							
Batch	1943187										
QC1204442276	497413012	DUP									
Technetium-99			U	-14.2	pCi/g	N/A			N/A	JJ3	12/01/19 18:39
	Uncertainty			+/-17.5							
QC1204442277	LCS										
Technetium-99				480	pCi/g		93.8	(75%-125%)		12/01/19	19:01
	Uncertainty			+/-25.4							
QC1204442275	MB										
Technetium-99			U	-12.3	pCi/g					12/01/19	18:17
	Uncertainty			+/-13.4							

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QC Summary

Workorder: 497413

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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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
- 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 #: 497413**

Metals

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1942808

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1942807

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
1204441325	Method Blank (MB)ICP
1204441326	Laboratory Control Sample (LCS)
1204441329	497413001(SED-29 0-6L) Serial Dilution (SD)
1204441327	497413001(SED-29 0-6S) Matrix Spike (MS)
1204441328	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of thallium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

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. Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 497413001 (SED-29 0-6), 497413002 (SED-29 6-12"), 497413003 (SED-29 12-16"), 497413004 (SED-30 0-6"), 497413005 (SED-30 6-12"), 497413008 (SED-32 0-6") and 497413009 (SED-32 6-12"). Sample required dilution in order to minimize suppression of antimony, silver and thallium due to matrix interferences. 497413010 (SED-33 0-6"). Samples required dilutions in order to minimize suppression of antimony, silver and thallium due to matrix interferences, and due to over range potassium. 497413006 (SED-31 0-6") and 497413007 (SED-31 6-12").

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Antimony	1X	1X	1X	1X	1X	10X	10X	1X	1X	10X
Potassium	1X	1X	1X	1X	1X	10X	10X	1X	1X	1X
Silver	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1942810

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1942809

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

GEL Sample ID#	Client Sample Identification
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204441330	Method Blank (MB) ICP
1204441331	Laboratory Control Sample (LCS)
1204441334	497413011(SED-33 6-12"L) Serial Dilution (SD)
1204441332	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204441333	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)
1204446774	497413011(SED-33 6-12"PS) 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

CRDL/PQL Requirements

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

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
1204441332 (SED-33 6-12"MS)	Silver	65.8* (75%-125%)
	Thallium	69.9* (75%-125%)
1204441333 (SED-33 6-12"MSD)	Manganese	66.7* (75%-125%)
	Silver	69.9* (75%-125%)
	Thallium	71.8* (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. Samples required dilutions in order to minimize suppression of silver, antimony and thallium due to matrix interferences. 497413011 (SED-33 6-12"), 497413014 (SED-34 6-12"), 497413015 (SED-35 0-6"), 497413016 (SED-35 6-12"), 497413018 (SED-36 6-12"), 497413020 (SED-37 6-12") and 497413021 (SED-37 6-12" DUP). Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 497413012 (SED-33 12-16"), 497413013 (SED-34 0-6"), 497413017 (SED-36 0-6") and 497413019 (SED-37 0-6").

Analyte	497413									
	011	012	013	014	015	016	017	018	019	020

Antimony	10X	1X	1X	10X	10X	10X	1X	10X	1X	10X
Silver	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	497413
	021
Antimony	10X
Silver	10X
Thallium	10X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1942804

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1942803

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
1204441315	Method Blank (MB) ICP-MS
1204441316	Laboratory Control Sample (LCS)
1204442597	Laboratory Control Sample (LCS)
1204441319	497413001(SED-29 0-6L) Serial Dilution (SD)
1204441317	497413001(SED-29 0-6S) Matrix Spike (MS)
1204442638	497413001(SED-29 0-6S) Matrix Spike (MS)
1204441318	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)
1204442639	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)
1204450273	497413001(SED-29 0-6PS) 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 analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204441317 (SED-29 0-6MS)	Uranium-235	175* (75%-125%)
	Uranium-238	130* (75%-125%)

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204441317MS and 1204441318MSD (SED-29 0-6)	Uranium-235	RPD 21.8* (0%-20%)

Technical Information**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497413010 (SED-33 0-6") was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	10X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1942806

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1942805

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204441320	Method Blank (MB) ICP-MS
1204441321	Laboratory Control Sample (LCS)
1204442640	Laboratory Control Sample (LCS)
1204441324	497413011(SED-33 6-12"L) Serial Dilution (SD)
1204441322	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204442641	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204441323	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)
1204442642	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were

diluted the standard two times.

Analyte	497413									
	011	012	013	014	015	016	017	018	019	020
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497413
	021
Uranium-234	2X
Uranium-235	2X
Uranium-238	2X

General Chemistry

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1942542 and 1942541

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413021	SED-37 6-12" DUP
1204440749	Method Blank (MB)
1204440750	Laboratory Control Sample (LCS)
1204440751	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204440752	497413011(SED-33 6-12") Sample Duplicate (DUP)
1204440753	497413021(SED-37 6-12" DUP) Sample Duplicate (DUP)
1204440754	497413001(SED-29 0-6) Matrix Spike (MS)
1204440755	497413011(SED-33 6-12") 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.

Calibration Information

Calibration Verification Information (CCV)

One or more of the calibration verification standards was above the required limits. The results for the following samples bracketed by the failing CCV are less than the MDL or are QC samples associated with these samples. Therefore, the data is deemed acceptable. 497413017 (SED-36 0-6") and 497413018 (SED-36 6-12").

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	1204440754 (SED-29 0-6MS)	37.7* (75%-125%)
	1204440755 (SED-33 6-12"MS)	55* (75%-125%)
	1204440756 (SED-37 6-12" DUPMS)	26.8* (75%-125%)

Duplicate Relative Percent Difference (RPD) Statement

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1204440752 (SED-33 6-12"DUP)	abs(0 - 1.56)* (+/-1.5 mg/kg)

Technical Information

Sample Re-analysis

Samples 1204440753 (SED-37 6-12" DUPDUP), 1204440756 (SED-37 6-12" DUPMS), 497413015 (SED-35 0-6"), 497413016 (SED-35 6-12"), 497413019 (SED-37 0-6") and 497413021 (SED-37 6-12" DUP) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

Miscellaneous Information

Manual Integrations

Samples 1204440750 (LCS) and 1204440756 (SED-37 6-12" DUPMS) were manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1944127 and 1944124

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413020	SED-37 6-12"
1204444267	Method Blank (MB)
1204444268	Laboratory Control Sample (LCS)
1204444269	497413020(SED-37 6-12") Sample Duplicate (DUP)
1204444270	497772001(SED-38 0) Sample Duplicate (DUP)
1204444271	497413020(SED-37 6-12") Matrix Spike (MS)
1204444272	497772001(SED-38 0) 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	1204444271 (SED-37 6-12"MS)	36.7* (75%-125%)
	1204444272 (SED-38 0MS)	45.3* (75%-125%)

Miscellaneous Information

Manual Integrations

Samples 1204444268 (LCS) and 497413020 (SED-37 6-12") were manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1 Modified

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1942607

Preparation Method: EPA 350.2 Modified Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1942606

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413021	SED-37 6-12" DUP
1204440861	Method Blank (MB)
1204440862	Laboratory Control Sample (LCS)
1204440863	Laboratory Control Sample Duplicate (LCSD)

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 Duplicate (LCSD)

An LCSD was used in place of matrix QC due to the high activity of the sample matrix (ALARA).

Technical Information

Sample Dilutions

The following sample 497413021 (SED-37 6-12" DUP) was diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	497413
	021
Nitrogen, Ammonia	5X

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1 Modified

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1942616

Preparation Method: EPA 350.2 Modified Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1942615

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"

497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204440873	Method Blank (MB)
1204440874	Laboratory Control Sample (LCS)
1204440875	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204440876	497413002(SED-29 6-12") Sample Duplicate (DUP)
1204440877	497413001(SED-29 0-6) Matrix Spike (MS)
1204440878	497413002(SED-29 6-12") 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
Nitrogen, Ammonia	1204440878 (SED-29 6-12"MS)	57.6* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1204440875 (SED-29 0-6DUP), 1204440876 (SED-29 6-12"DUP), 1204440877 (SED-29 0-6MS), 1204440878 (SED-29 6-12"MS), 497413001 (SED-29 0-6), 497413002 (SED-29 6-12"), 497413003 (SED-29 12-16"), 497413004 (SED-30 0-6"), 497413005 (SED-30 6-12"), 497413006 (SED-31 0-6"), 497413007 (SED-31 6-12"), 497413008 (SED-32 0-6"), 497413009 (SED-32 6-12"), 497413010 (SED-33 0-6"), 497413013 (SED-34 0-6"), 497413014 (SED-34 6-12"), 497413015 (SED-35 0-6"), 497413017 (SED-36 0-6") and 497413019 (SED-37 0-6") were diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Nitrogen, Ammonia	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	497413				
	013	014	015	017	019
Nitrogen, Ammonia	10X	10X	10X	10X	10X

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: 1942981

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1942654

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204441749	Method Blank (MB)
1204441750	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204441751	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 497413012 (SED-33 12-16") was recounted due to a peak shift. The recount is reported. Samples 497413005 (SED-30 6-12"), 497413014 (SED-34 6-12") and 497413016 (SED-35 6-12") were given additional clean-up steps and recounted in order to improve the resolution. The recounts are reported. Samples 497413004 (SED-30 0-6") and 497413015 (SED-35 0-6") were recounted due to a peak shift and then given additional clean-up steps and recounted again in order to improve the resolution. The third counts are 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:** 1942989**Preparation Method:** Dry Soil Prep**Preparation Procedure:** GL-RAD-A-021 REV# 23**Preparation Batch:** 1942870

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413021	SED-37 6-12" DUP
1204441775	Method Blank (MB)
1204441776	497413021(SED-37 6-12" DUP) Sample Duplicate (DUP)
1204441777	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**

Samples 1204441776 (SED-37 6-12" DUPDUP) and 497413021 (SED-37 6-12" DUP) were given additional clean-up steps and recounted in order to improve the resolution. The recounts are reported.

Product: Dry Weight**Analytical Method:** ASTM D 2216 (Modified)**Analytical Procedure:** GL-OA-E-020 REV# 13**Analytical Batch:** 1942654

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1942654

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204440926	497413011(SED-33 6-12") 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: Dry Weight
Analytical Method: ASTM D 2216 (Modified)
Analytical Procedure: GL-OA-E-020 REV# 13
Analytical Batch: 1942870

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 23
Preparation Batch: 1942870

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413021	SED-37 6-12" 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: 1943186

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
1204442272	Method Blank (MB)
1204442273	497413002(SED-29 6-12") Sample Duplicate (DUP)
1204442274	Laboratory Control Sample (LCS)

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: 1943187

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204442275	Method Blank (MB)
1204442276	497413012(SED-33 12-16") Sample Duplicate (DUP)
1204442277	Laboratory Control Sample (LCS)

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.

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager:
 Phone # 803.647.1920 Fax # _____
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	Date	Time	Relinquished By (Signed)	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:		Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)					Comments
											Yes, please supply isotopic info. (f)	(7) Known or possible Hazards		Isotopic U	TAL Metals	Ammonia	Fluoride	Preservative Type (6)	
SED-29 0-6"	11/20/19	14:35	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	Note: extra sample is required for sample specific QC
SED-29 6-12"	11/20/19	14:40	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-29 12-16"	11/20/19	14:45	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-30 0-6"	11/21/19	09:55	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-30 6-12"	11/21/19	10:00	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-31 0-6"	11/21/19	12:00	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-31 6-12"	11/21/19	12:05	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-32 0-6"	11/21/19	14:00	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-32 6-12"	11/21/19	14:05	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	
SED-33 0-6"	11/21/19	15:00	G	N	SD	Y	OT	Y	X	X	X	X	1	1	1	1	1	1	

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[Signature]	16-22-19	12:10	[Signature]	11-22-19	12:10
[Signature]	16-22-19	14:42	[Signature]	11-22-19	14:42

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: _____

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other

- 1) Chain of Custody Number = Client Determined
- 2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- 3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered
- 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, 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 | 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 Chain of Custody and Analytical Request

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number: _____

Page: 2 of 3
 Project #: 60525649
 GEL Quote #: _____
 QCOC Number (1): _____
 PO Number: _____

Client Name: Westinghouse Phone #: 803-647-1920
 Project/Site Name: WNWCO0518 Fax #: _____

Address: 5801 Bluff Road Hopkins, SC 29061
 Collected by: James Beegharta Send Results To: jbeegharta@westinghouse.com
Corey Pugh

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Sample Analysis Requested (5) (Fill in the number of containers for each test)						Comments	
						TC-99	Isotopic	TAL Metals	Ammonia	Fluoride	Preservative Type (6)		
SED-33* 6-12"	11/21/19	15:05	G	N	SD	X	X	X	X	X	X		
SED-33 12-16"	11/21/19	16:10	G	N	SD	X	X	X	X	X	X		
SED-34 0-6"	11/21/19	16:10	G	N	SD	X	X	X	X	X	X		
SED-34 6-12"	11/22/19	08:45	G	N	SD	X	X	X	X	X	X		
SED-35 0-6"	11/22/19	08:40	G	N	SD	X	X	X	X	X	X		
SED-35 6-12"	11/22/19	08:45	G	N	SD	X	X	X	X	X	X		
SED-36 0-6"	11/22/19	10:05	G	N	SD	X	X	X	X	X	X		
SED-36 6-12"	11/22/19	10:05	G	N	SD	X	X	X	X	X	X		
SED-37 0-6"	11/22/19	11:20	G	N	SD	X	X	X	X	X	X		
SED-37 6-12"	11/22/19	11:25	G	N	SD	X	X	X	X	X	X		

TAT Requested: Normal. Rush: Specify: _____ Fax Results: Yes / No
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
 Sample Collection Time Zone: Eastern Pacific Other _____
 Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Chain of Custody Signatures		
Relinquished By (Signed)	Date	Time
<u>James Beegharta</u>	<u>11-22-19</u>	<u>12:10</u>
<u>Corey Pugh</u>	<u>11-22-19</u>	<u>14:42</u>
<u>James Beegharta</u>	<u>11-22-19</u>	<u>14:42</u>

GEL PM: _____ Date Shipped: _____
 Method of Shipment: _____ Airbill #: _____
 Airbill #: 3

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=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

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

For Lab Receiving Use Only
 Custody Seal Intact?
 YES NO
 Cooler Temp: _____ C

SAMPLE RECEIPT & REVIEW FORM

497413

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>H-T</u>		
Received By: <u>NR</u>		Date Received: <u>11-22-19</u>		
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other <u>Drop off</u>		
Suspected Hazard Information		Yes	No	
		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / ml/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>2C</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>12-18</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 ___
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				

PM (or PMA) review: Initials SH Date 11/25/19 Page 1 of 1

List of current GEL Certifications as of 09 December 2019

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	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 12, 2019

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

Re: ENV-CONSENTA
Work Order: 497772

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 27, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

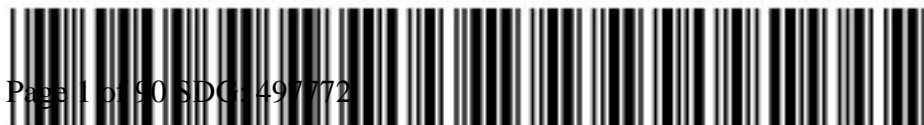
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without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

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

Sincerely,

Hope Taylor
Project Manager

Purchase Order: 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: 497772 GEL Work Order: 497772

The Qualifiers in this report are defined as follows:

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

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

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

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

Reviewed by top a d

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-38 0	Project: WNUC01519
Sample ID: 497772001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 72.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.17	1.23	3.62	mg/kg	10.1	1	CH5	11/30/19	0242	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	72.9	54.2	163	ug/kg	113	1	MTM1	12/09/19	1045	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		23200000	23700	69600	ug/kg	96.7	1	TXT1	12/09/19	2040	1944141	3
Antimony	U	ND	1150	6960	ug/kg	96.7	1					
Arsenic	J	4300	1740	10400	ug/kg	96.7	1					
Barium		206000	348	1740	ug/kg	96.7	1					
Beryllium		2390	348	1740	ug/kg	96.7	1					
Cadmium	U	ND	348	1740	ug/kg	96.7	1					
Calcium		914000	27800	87000	ug/kg	96.7	1					
Chromium		24900	522	3480	ug/kg	96.7	1					
Cobalt		14300	522	1740	ug/kg	96.7	1					
Copper		22100	1040	6960	ug/kg	96.7	1					
Iron		18400000	27800	87000	ug/kg	96.7	1					
Lead		13600	1150	6960	ug/kg	96.7	1					
Magnesium		2260000	29600	104000	ug/kg	96.7	1					
Manganese		498000	696	3480	ug/kg	96.7	1					
Nickel		13900	522	1740	ug/kg	96.7	1					
Potassium		1210000	22300	87000	ug/kg	96.7	1					
Selenium	U	ND	1740	10400	ug/kg	96.7	1					
Sodium	J	83100	24400	87000	ug/kg	96.7	1					
Vanadium		54300	348	1740	ug/kg	96.7	1					
Zinc		54500	1390	6960	ug/kg	96.7	1					
Silver	U	ND	3480	17400	ug/kg	96.7	10	TXT1	12/10/19	1147	1944141	4
Thallium	U	ND	17400	69600	ug/kg	96.7	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	31.8	6.92	48.4	ug/kg	96.2	2	PRB	12/12/19	0806	1945910	5
Uranium-238		3380	45.7	138	ug/kg	96.2	2					
Uranium-234	U	ND	6.92	34.6	ug/kg	96.2	2	PRB	12/12/19	1026	1945910	6
Nutrient Analysis												

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-38 0 Project: WNUC01519
Sample ID: 497772001 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		576	12.9	35.7	mg/kg	39.7	5	KLP1	12/03/19	1059	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-39 0"-6"	Project:	WNUC01519
Sample ID:	497772002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	22-NOV-19 15:20		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	42.1%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.90	0.578	1.70	mg/kg	9.85	1	CH5	11/30/19	0411	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	56.8	23.0	69.3	ug/kg	100	1	MTM1	12/09/19	1047	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		30400000	11300	33200	ug/kg	96.2	1	TXT1	12/09/19	2043	1944141	3
Antimony	U	ND	548	3320	ug/kg	96.2	1					
Arsenic	J	4050	830	4980	ug/kg	96.2	1					
Barium		167000	166	830	ug/kg	96.2	1					
Beryllium		3000	166	830	ug/kg	96.2	1					
Cadmium	U	ND	166	830	ug/kg	96.2	1					
Calcium		297000	13300	41500	ug/kg	96.2	1					
Chromium		35400	249	1660	ug/kg	96.2	1					
Cobalt		13000	249	830	ug/kg	96.2	1					
Copper		24600	498	3320	ug/kg	96.2	1					
Iron		19900000	13300	41500	ug/kg	96.2	1					
Lead		21100	548	3320	ug/kg	96.2	1					
Magnesium		3330000	14100	49800	ug/kg	96.2	1					
Manganese		210000	332	1660	ug/kg	96.2	1					
Nickel		16900	249	830	ug/kg	96.2	1					
Potassium		1400000	10600	41500	ug/kg	96.2	1					
Selenium	U	ND	830	4980	ug/kg	96.2	1					
Sodium		59900	11600	41500	ug/kg	96.2	1					
Vanadium		71200	166	830	ug/kg	96.2	1					
Zinc		72100	664	3320	ug/kg	96.2	1					
Silver	U	ND	1660	8300	ug/kg	96.2	10	TXT1	12/10/19	1149	1944141	4
Thallium	U	ND	8300	33200	ug/kg	96.2	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		26.4	3.18	22.3	ug/kg	92.1	2	PRB	12/12/19	0808	1945910	5
Uranium-238		3040	21.0	63.6	ug/kg	92.1	2					
Uranium-234	U	ND	3.18	15.9	ug/kg	92.1	2	PRB	12/12/19	1028	1945910	6
Nutrient Analysis												

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-39 0"-6"
Sample ID: 497772002

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		222	6.58	18.3	mg/kg	42.4	5	KLP1	12/03/19	1100	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"	Project: WNUC01519
Sample ID: 497772003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 12:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 47.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.65	0.644	1.89	mg/kg	9.98	1	CH5	11/30/19	0441	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	55.5	28.2	84.7	ug/kg	112	1	MTM1	12/09/19	1048	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		20800000	11800	34800	ug/kg	91.6	1	TXT1	12/09/19	2028	1944141	3
Antimony	U	ND	574	3480	ug/kg	91.6	1					
Arsenic	J	3470	870	5220	ug/kg	91.6	1					
Barium		137000	174	870	ug/kg	91.6	1					
Beryllium		1470	174	870	ug/kg	91.6	1					
Cadmium	U	ND	174	870	ug/kg	91.6	1					
Calcium		429000	13900	43500	ug/kg	91.6	1					
Chromium		26500	261	1740	ug/kg	91.6	1					
Cobalt		10000	261	870	ug/kg	91.6	1					
Copper		19600	522	3480	ug/kg	91.6	1					
Iron		16100000	13900	43500	ug/kg	91.6	1					
Lead		20400	574	3480	ug/kg	91.6	1					
Magnesium		2700000	14800	52200	ug/kg	91.6	1					
Manganese		250000	348	1740	ug/kg	91.6	1					
Nickel		11300	261	870	ug/kg	91.6	1					
Potassium		1420000	11100	43500	ug/kg	91.6	1					
Selenium	U	ND	870	5220	ug/kg	91.6	1					
Sodium		48500	12200	43500	ug/kg	91.6	1					
Vanadium		62700	174	870	ug/kg	91.6	1					
Zinc		49200	696	3480	ug/kg	91.6	1					
Silver	U	ND	1740	8700	ug/kg	91.6	10	TXT1	12/10/19	1133	1944141	4
Thallium	U	ND	8700	34800	ug/kg	91.6	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		28.4	3.47	24.3	ug/kg	91.4	2	PRB	12/12/19	0809	1945910	5
Uranium-238		3020	22.9	69.4	ug/kg	91.4	2					
Uranium-234	U	ND	3.47	17.4	ug/kg	91.4	2	PRB	12/12/19	1030	1945910	6
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"
Sample ID: 497772003

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		242	6.78	18.8	mg/kg	39.7	5	KLP1	12/03/19	1101	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"	Project: WNUC01519
Sample ID: 497772004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 65.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.68	0.997	2.93	mg/kg	10.0	1	CH5	11/30/19	0611	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	72.4	40.3	121	ug/kg	103	1	MTM1	12/09/19	1057	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27100000	19100	56200	ug/kg	96.0	1	TXT1	12/09/19	2046	1944141	3
Antimony	U	ND	927	5620	ug/kg	96.0	1					
Arsenic	J	4250	1400	8430	ug/kg	96.0	1					
Barium		214000	281	1400	ug/kg	96.0	1					
Beryllium		2010	281	1400	ug/kg	96.0	1					
Cadmium	U	ND	281	1400	ug/kg	96.0	1					
Calcium		754000	22500	70200	ug/kg	96.0	1					
Chromium		29400	421	2810	ug/kg	96.0	1					
Cobalt		26700	421	1400	ug/kg	96.0	1					
Copper		25800	843	5620	ug/kg	96.0	1					
Iron		24300000	22500	70200	ug/kg	96.0	1					
Lead		21900	927	5620	ug/kg	96.0	1					
Magnesium		2610000	23900	84300	ug/kg	96.0	1					
Manganese		395000	562	2810	ug/kg	96.0	1					
Nickel		16900	421	1400	ug/kg	96.0	1					
Potassium		1580000	18000	70200	ug/kg	96.0	1					
Selenium	U	ND	1400	8430	ug/kg	96.0	1					
Sodium	J	69000	19700	70200	ug/kg	96.0	1					
Vanadium		85800	281	1400	ug/kg	96.0	1					
Zinc		68900	1120	5620	ug/kg	96.0	1					
Silver	U	ND	2810	14000	ug/kg	96.0	10	TXT1	12/10/19	1152	1944141	4
Thallium	U	ND	14000	56200	ug/kg	96.0	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	17.8	5.38	37.7	ug/kg	91.9	2	PRB	12/12/19	0821	1945910	5
Uranium-238		2390	35.5	108	ug/kg	91.9	2					
Uranium-234	U	ND	5.38	26.9	ug/kg	91.9	2	PRB	12/12/19	1042	1945910	6
Nutrient Analysis												

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"
Sample ID: 497772004

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		466	12.4	34.5	mg/kg	47.2	5	KLP1	12/03/19	1103	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

Client Sample ID: SED-42 0"-6"	Project: WNUC01519
Sample ID: 497772005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:35	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 81.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	5.15	1.80	5.30	mg/kg	9.90	1	CH5	11/30/19	0641	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	119	75.7	228	ug/kg	106	1	MTM1	12/09/19	1102	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27500000	35100	103000	ug/kg	96.3	1	TXT1	12/09/19	2055	1944141	3
Antimony	U	ND	1700	10300	ug/kg	96.3	1					
Arsenic	J	6150	2580	15500	ug/kg	96.3	1					
Barium		220000	516	2580	ug/kg	96.3	1					
Beryllium	J	1670	516	2580	ug/kg	96.3	1					
Cadmium	U	ND	516	2580	ug/kg	96.3	1					
Calcium		1520000	41200	129000	ug/kg	96.3	1					
Chromium		31400	773	5160	ug/kg	96.3	1					
Cobalt		17800	773	2580	ug/kg	96.3	1					
Copper		30900	1550	10300	ug/kg	96.3	1					
Iron		25100000	41200	129000	ug/kg	96.3	1					
Lead		105000	1700	10300	ug/kg	96.3	1					
Magnesium		1910000	43800	155000	ug/kg	96.3	1					
Manganese		463000	1030	5160	ug/kg	96.3	1					
Nickel		16800	773	2580	ug/kg	96.3	1					
Potassium		1150000	33000	129000	ug/kg	96.3	1					
Selenium	U	ND	2580	15500	ug/kg	96.3	1					
Sodium	J	88600	36100	129000	ug/kg	96.3	1					
Vanadium		95100	516	2580	ug/kg	96.3	1					
Zinc		81000	2060	10300	ug/kg	96.3	1					
Silver	U	ND	5160	25800	ug/kg	96.3	10	TXT1	12/10/19	1202	1944141	4
Thallium	U	ND	25800	103000	ug/kg	96.3	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		156	10.5	73.5	ug/kg	98.0	2	PRB	12/12/19	0823	1945910	5
Uranium-238		7220	69.3	210	ug/kg	98.0	2					
Uranium-234	U	ND	10.5	52.5	ug/kg	98.0	2	PRB	12/12/19	1044	1945910	6
Nutrient Analysis												

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

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-42 0"-6"
Sample ID: 497772005

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		928	15.1	41.8	mg/kg	31.3	5	KLP1	12/03/19	1104	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-43 0"-6"	Project:	WNUC01519
Sample ID:	497772006	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	25-NOV-19 12:20		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	83.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		14.9	1.95	5.73	mg/kg	9.59	1	CH5	11/30/19	0710	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	90.7	273	ug/kg	114	1	MTM1	12/09/19	1104	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15200000	39000	115000	ug/kg	96.0	1	TXT1	12/09/19	2058	1944141	3
Antimony	U	ND	1890	11500	ug/kg	96.0	1					
Arsenic	J	3570	2870	17200	ug/kg	96.0	1					
Barium		105000	574	2870	ug/kg	96.0	1					
Beryllium	J	858	574	2870	ug/kg	96.0	1					
Cadmium	U	ND	574	2870	ug/kg	96.0	1					
Calcium		813000	45900	143000	ug/kg	96.0	1					
Chromium		15600	860	5740	ug/kg	96.0	1					
Cobalt		4780	860	2870	ug/kg	96.0	1					
Copper		16700	1720	11500	ug/kg	96.0	1					
Iron		8080000	45900	143000	ug/kg	96.0	1					
Lead		16000	1890	11500	ug/kg	96.0	1					
Magnesium		1200000	48800	172000	ug/kg	96.0	1					
Manganese		131000	1150	5740	ug/kg	96.0	1					
Nickel		10200	860	2870	ug/kg	96.0	1					
Potassium		684000	36700	143000	ug/kg	96.0	1					
Selenium	U	ND	2870	17200	ug/kg	96.0	1					
Silver	U	ND	574	2870	ug/kg	96.0	1					
Sodium	J	83900	40200	143000	ug/kg	96.0	1					
Thallium	U	ND	2870	11500	ug/kg	96.0	1					
Vanadium		36500	574	2870	ug/kg	96.0	1					
Zinc		53000	2290	11500	ug/kg	96.0	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-238		31300	73.7	223	ug/kg	93.5	2	PRB	12/12/19	0825	1945910	4
Uranium-235		862	27.9	196	ug/kg	93.5	5	PRB	12/12/19	0850	1945910	5
Uranium-234	U	ND	11.2	55.9	ug/kg	93.5	2	PRB	12/12/19	1046	1945910	6
Nutrient Analysis												

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Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-43 0"-6"
Sample ID: 497772006

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		774	18.4	51.2	mg/kg	34.2	5	KLP1	12/03/19	1105	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-44 0"-6"	Project: WNUC01519
Sample ID: 497772007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 11:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	3.04	1.17	3.46	mg/kg	9.76	1	CH5	11/30/19	0740	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	69.9	55.6	167	ug/kg	118	1	MTM1	12/09/19	1105	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27000000	24000	70600	ug/kg	99.6	1	TXT1	12/09/19	2101	1944141	3
Antimony	U	ND	1160	7060	ug/kg	99.6	1					
Arsenic	J	4380	1760	10600	ug/kg	99.6	1					
Barium		207000	353	1760	ug/kg	99.6	1					
Beryllium		2320	353	1760	ug/kg	99.6	1					
Cadmium	U	ND	353	1760	ug/kg	99.6	1					
Calcium		679000	28200	88200	ug/kg	99.6	1					
Chromium		29500	529	3530	ug/kg	99.6	1					
Cobalt		10200	529	1760	ug/kg	99.6	1					
Copper		21700	1060	7060	ug/kg	99.6	1					
Iron		17100000	28200	88200	ug/kg	99.6	1					
Lead		18800	1160	7060	ug/kg	99.6	1					
Magnesium		2080000	30000	106000	ug/kg	99.6	1					
Manganese		254000	706	3530	ug/kg	99.6	1					
Nickel		17500	529	1760	ug/kg	99.6	1					
Potassium		1230000	22600	88200	ug/kg	99.6	1					
Selenium	U	ND	1760	10600	ug/kg	99.6	1					
Sodium	J	80700	24700	88200	ug/kg	99.6	1					
Vanadium		68800	353	1760	ug/kg	99.6	1					
Zinc		56100	1410	7060	ug/kg	99.6	1					
Silver	U	ND	3530	17600	ug/kg	99.6	10	TXT1	12/10/19	1205	1944141	4
Thallium	U	ND	17600	70600	ug/kg	99.6	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		238	6.50	45.5	ug/kg	91.7	2	PRB	12/12/19	0826	1945910	5
Uranium-238		9690	42.9	130	ug/kg	91.7	2					
Uranium-234	U	ND	6.50	32.5	ug/kg	91.7	2	PRB	12/12/19	1048	1945910	6
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-44 0"-6"
Sample ID: 497772007

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		389	14.2	39.5	mg/kg	44.6	5	KLP1	12/03/19	1106	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"	Project: WNUC01519
Sample ID: 497772008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 15:25	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		7.90	1.19	3.49	mg/kg	9.98	1	CH5	11/30/19	0810	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	107	52.9	159	ug/kg	114	1	MTM1	12/09/19	1107	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		19500000	22100	65000	ug/kg	92.8	1	TXT1	12/09/19	2104	1944141	3
Antimony	U	ND	1070	6500	ug/kg	92.8	1					
Arsenic	J	2380	1620	9740	ug/kg	92.8	1					
Barium		150000	325	1620	ug/kg	92.8	1					
Beryllium	J	1320	325	1620	ug/kg	92.8	1					
Cadmium	U	ND	325	1620	ug/kg	92.8	1					
Calcium		1170000	26000	81200	ug/kg	92.8	1					
Chromium		23600	487	3250	ug/kg	92.8	1					
Cobalt		7420	487	1620	ug/kg	92.8	1					
Copper		18900	974	6500	ug/kg	92.8	1					
Iron		11900000	26000	81200	ug/kg	92.8	1					
Lead		40400	1070	6500	ug/kg	92.8	1					
Magnesium		2030000	27600	97400	ug/kg	92.8	1					
Manganese		224000	650	3250	ug/kg	92.8	1					
Nickel		11800	487	1620	ug/kg	92.8	1					
Potassium		1010000	20800	81200	ug/kg	92.8	1					
Selenium	U	ND	1620	9740	ug/kg	92.8	1					
Sodium		126000	22700	81200	ug/kg	92.8	1					
Vanadium		49900	325	1620	ug/kg	92.8	1					
Zinc		49100	1300	6500	ug/kg	92.8	1					
Silver	U	ND	3250	16200	ug/kg	92.8	10	TXT1	12/10/19	1207	1944141	4
Thallium	U	ND	16200	65000	ug/kg	92.8	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		100	6.91	48.3	ug/kg	98.6	2	PRB	12/12/19	0828	1945910	5
Uranium-238		4920	45.6	138	ug/kg	98.6	2					
Uranium-234	U	ND	6.91	34.5	ug/kg	98.6	2	PRB	12/12/19	1050	1945910	6
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"
Sample ID: 497772008

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		586	10.2	28.4	mg/kg	32.5	5	KLP1	12/03/19	1111	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"	Project: WNUC01519
Sample ID: 497772009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 68.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.41	1.02	3.01	mg/kg	9.50	1	CH5	11/30/19	0840	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	47.0	141	ug/kg	112	1	MTM1	12/09/19	1109	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		25100000	20700	61000	ug/kg	96.3	1	TXT1	12/09/19	2107	1944141	3
Antimony	U	ND	1010	6100	ug/kg	96.3	1					
Arsenic	J	3990	1530	9150	ug/kg	96.3	1					
Barium		103000	305	1530	ug/kg	96.3	1					
Beryllium	J	1290	305	1530	ug/kg	96.3	1					
Cadmium	U	ND	305	1530	ug/kg	96.3	1					
Calcium		620000	24400	76300	ug/kg	96.3	1					
Chromium		26000	458	3050	ug/kg	96.3	1					
Cobalt		5510	458	1530	ug/kg	96.3	1					
Copper		19600	915	6100	ug/kg	96.3	1					
Iron		12100000	24400	76300	ug/kg	96.3	1					
Lead		33800	1010	6100	ug/kg	96.3	1					
Magnesium		1620000	25900	91500	ug/kg	96.3	1					
Manganese		104000	610	3050	ug/kg	96.3	1					
Nickel		10600	458	1530	ug/kg	96.3	1					
Potassium		946000	19500	76300	ug/kg	96.3	1					
Selenium	U	ND	1530	9150	ug/kg	96.3	1					
Sodium		105000	21400	76300	ug/kg	96.3	1					
Vanadium		68100	305	1530	ug/kg	96.3	1					
Zinc		38600	1220	6100	ug/kg	96.3	1					
Silver	U	ND	3050	15300	ug/kg	96.3	10	TXT1	12/10/19	1210	1944141	4
Thallium	U	ND	15300	61000	ug/kg	96.3	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		48.9	6.11	42.8	ug/kg	96.5	2	PRB	12/12/19	0830	1945910	5
Uranium-238		3190	40.3	122	ug/kg	96.5	2					
Uranium-234	U	ND	6.11	30.6	ug/kg	96.5	2	PRB	12/12/19	1052	1945910	6
Nutrient Analysis												

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

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"
Sample ID: 497772009

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		371	13.0	36.0	mg/kg	45.5	5	KLP1	12/03/19	1112	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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

Client Sample ID: SED-47 0"-6"	Project: WNUC01519
Sample ID: 497772010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 10:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 77.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		6.02	1.50	4.41	mg/kg	10.1	1	CH5	11/30/19	0910	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	106	58.8	177	ug/kg	101	1	MTM1	12/09/19	1110	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		22000000	29600	87200	ug/kg	99.6	1	TXT1	12/09/19	2110	1944141	3
Antimony	U	ND	1440	8720	ug/kg	99.6	1					
Arsenic	J	4190	2180	13100	ug/kg	99.6	1					
Barium		188000	436	2180	ug/kg	99.6	1					
Beryllium	J	1320	436	2180	ug/kg	99.6	1					
Cadmium	U	ND	436	2180	ug/kg	99.6	1					
Calcium		737000	34900	109000	ug/kg	99.6	1					
Chromium		27000	654	4360	ug/kg	99.6	1					
Cobalt		7780	654	2180	ug/kg	99.6	1					
Copper		22300	1310	8720	ug/kg	99.6	1					
Iron		13200000	34900	109000	ug/kg	99.6	1					
Lead		43100	1440	8720	ug/kg	99.6	1					
Magnesium		1980000	37000	131000	ug/kg	99.6	1					
Manganese		242000	872	4360	ug/kg	99.6	1					
Nickel		12900	654	2180	ug/kg	99.6	1					
Potassium		1080000	27900	109000	ug/kg	99.6	1					
Selenium	U	ND	2180	13100	ug/kg	99.6	1					
Silver	U	ND	436	2180	ug/kg	99.6	1					
Sodium		129000	30500	109000	ug/kg	99.6	1					
Vanadium		50300	436	2180	ug/kg	99.6	1					
Zinc		49600	1740	8720	ug/kg	99.6	1					
Thallium	U	ND	21800	87200	ug/kg	99.6	10	TXT1	12/10/19	1213	1944141	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	44.0	8.19	57.4	ug/kg	93.6	2	PRB	12/12/19	0831	1945910	5
Uranium-238		2560	54.1	164	ug/kg	93.6	2					
Uranium-234	U	ND	8.19	41.0	ug/kg	93.6	2	PRB	12/12/19	1054	1945910	6
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-47 0"-6"
Sample ID: 497772010

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1540	23.7	65.9	mg/kg	30.1	10	KLP1	12/03/19	1112	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-48 0"-6"	Project:	WNUC01519
Sample ID:	497772011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	26-NOV-19 11:30		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	63.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.94	0.884	2.60	mg/kg	9.52	1	CH5	11/30/19	0940	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	107	37.4	113	ug/kg	103	1	MTM1	12/09/19	1112	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		26400000	17000	50100	ug/kg	91.7	1	TXT1	12/09/19	2113	1944141	3
Antimony	U	ND	826	5010	ug/kg	91.7	1					
Arsenic	J	3850	1250	7510	ug/kg	91.7	1					
Barium		154000	250	1250	ug/kg	91.7	1					
Beryllium		1350	250	1250	ug/kg	91.7	1					
Cadmium	U	ND	250	1250	ug/kg	91.7	1					
Calcium		408000	20000	62600	ug/kg	91.7	1					
Chromium		26900	376	2500	ug/kg	91.7	1					
Cobalt		7530	376	1250	ug/kg	91.7	1					
Copper		26400	751	5010	ug/kg	91.7	1					
Iron		12400000	20000	62600	ug/kg	91.7	1					
Lead		37400	826	5010	ug/kg	91.7	1					
Magnesium		1670000	21300	75100	ug/kg	91.7	1					
Manganese		249000	501	2500	ug/kg	91.7	1					
Nickel		11600	376	1250	ug/kg	91.7	1					
Potassium		929000	16000	62600	ug/kg	91.7	1					
Selenium	U	ND	1250	7510	ug/kg	91.7	1					
Sodium		93600	17500	62600	ug/kg	91.7	1					
Vanadium		65900	250	1250	ug/kg	91.7	1					
Zinc		46400	1000	5010	ug/kg	91.7	1					
Silver	U	ND	2500	12500	ug/kg	91.7	10	TXT1	12/10/19	1216	1944141	4
Thallium	U	ND	12500	50100	ug/kg	91.7	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		40.3	5.17	36.2	ug/kg	94.7	2	PRB	12/12/19	0833	1945910	5
Uranium-238		3140	34.1	103	ug/kg	94.7	2					
Uranium-234	U	ND	5.17	25.8	ug/kg	94.7	2	PRB	12/12/19	1100	1945910	6
Nutrient Analysis												

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Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-48 0"-6"
Sample ID: 497772011

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		806	19.2	53.3	mg/kg	39.1	10	KLP1	12/03/19	1113	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"	Project: WNUC01519
Sample ID: 497772012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 67.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.46	1.05	3.09	mg/kg	9.95	1	CH5	11/30/19	1009	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	118	43.6	131	ug/kg	106	1	MTM1	12/09/19	1114	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		20300000	19300	56800	ug/kg	91.4	1	TXT1	12/09/19	2116	1944141	3
Antimony	U	ND	937	5680	ug/kg	91.4	1					
Arsenic	J	3380	1420	8510	ug/kg	91.4	1					
Barium		146000	284	1420	ug/kg	91.4	1					
Beryllium	J	1190	284	1420	ug/kg	91.4	1					
Cadmium	U	ND	284	1420	ug/kg	91.4	1					
Calcium		435000	22700	70900	ug/kg	91.4	1					
Chromium		23000	426	2840	ug/kg	91.4	1					
Cobalt		6390	426	1420	ug/kg	91.4	1					
Copper		26100	851	5680	ug/kg	91.4	1					
Iron		9320000	22700	70900	ug/kg	91.4	1					
Lead		80000	937	5680	ug/kg	91.4	1					
Magnesium		1250000	24100	85100	ug/kg	91.4	1					
Manganese		286000	568	2840	ug/kg	91.4	1					
Nickel		9870	426	1420	ug/kg	91.4	1					
Potassium		708000	18200	70900	ug/kg	91.4	1					
Selenium	U	ND	1420	8510	ug/kg	91.4	1					
Silver	U	ND	284	1420	ug/kg	91.4	1					
Sodium		112000	19900	70900	ug/kg	91.4	1					
Vanadium		57700	284	1420	ug/kg	91.4	1					
Zinc		42100	1140	5680	ug/kg	91.4	1					
Thallium	U	ND	14200	56800	ug/kg	91.4	10	TXT1	12/10/19	1218	1944141	4
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	37.4	5.91	41.4	ug/kg	95.2	2	PRB	12/12/19	0838	1945910	5
Uranium-238		2650	39.0	118	ug/kg	95.2	2					
Uranium-234	U	ND	5.91	29.6	ug/kg	95.2	2	PRB	12/12/19	1102	1945910	6
Nutrient Analysis												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"
Sample ID: 497772012

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1080	29.7	82.6	mg/kg	53.2	10	KLP1	12/03/19	1114	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-49 0"-6"	Project: WNUC01519
Sample ID: 497772013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 13:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 73.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.44	1.23	3.62	mg/kg	9.48	1	CH5	11/30/19	1039	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	87.2	53.9	162	ug/kg	106	1	MTM1	12/09/19	1115	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		14300000	25900	76200	ug/kg	99.6	1	TXT1	12/09/19	2119	1944141	3
Antimony	U	ND	1260	7620	ug/kg	99.6	1					
Arsenic	J	2120	1900	11400	ug/kg	99.6	1					
Barium		69200	381	1900	ug/kg	99.6	1					
Beryllium	J	727	381	1900	ug/kg	99.6	1					
Cadmium	U	ND	381	1900	ug/kg	99.6	1					
Calcium		258000	30500	95200	ug/kg	99.6	1					
Chromium		13900	571	3810	ug/kg	99.6	1					
Cobalt		3570	571	1900	ug/kg	99.6	1					
Copper		11300	1140	7620	ug/kg	99.6	1					
Iron		6750000	30500	95200	ug/kg	99.6	1					
Lead		11500	1260	7620	ug/kg	99.6	1					
Magnesium		1040000	32400	114000	ug/kg	99.6	1					
Manganese		75900	762	3810	ug/kg	99.6	1					
Nickel		6890	571	1900	ug/kg	99.6	1					
Potassium		621000	24400	95200	ug/kg	99.6	1					
Selenium	U	ND	1900	11400	ug/kg	99.6	1					
Silver	U	ND	381	1900	ug/kg	99.6	1					
Sodium	J	78400	26700	95200	ug/kg	99.6	1					
Thallium	U	ND	1900	7620	ug/kg	99.6	1					
Vanadium		32400	381	1900	ug/kg	99.6	1					
Zinc		27000	1520	7620	ug/kg	99.6	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		81.9	7.44	52.1	ug/kg	97.3	2	PRB	12/12/19	0840	1945910	4
Uranium-238		4840	49.1	149	ug/kg	97.3	2					
Uranium-234	U	ND	7.44	37.2	ug/kg	97.3	2	PRB	12/12/19	1104	1945910	5
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-49 0"-6"
Sample ID: 497772013

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		209	2.53	7.03	mg/kg	36.8	1	KLP1	12/03/19	1051	1943957	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"	Project: WNUC01519
Sample ID: 497772014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 14:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 69.5%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.67	1.09	3.22	mg/kg	9.80	1	CH5	11/30/19	1209	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	108	52.2	157	ug/kg	120	1	MTM1	12/09/19	1117	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		22500000	22200	65200	ug/kg	99.4	1	TXT1	12/09/19	2121	1944141	3
Antimony	U	ND	1080	6520	ug/kg	99.4	1					
Arsenic	J	3640	1630	9780	ug/kg	99.4	1					
Barium		178000	326	1630	ug/kg	99.4	1					
Beryllium	J	1620	326	1630	ug/kg	99.4	1					
Cadmium	U	ND	326	1630	ug/kg	99.4	1					
Calcium		1120000	26100	81500	ug/kg	99.4	1					
Chromium		25700	489	3260	ug/kg	99.4	1					
Cobalt		10500	489	1630	ug/kg	99.4	1					
Copper		25800	978	6520	ug/kg	99.4	1					
Iron		15300000	26100	81500	ug/kg	99.4	1					
Lead		32100	1080	6520	ug/kg	99.4	1					
Magnesium		2440000	27700	97800	ug/kg	99.4	1					
Manganese		368000	652	3260	ug/kg	99.4	1					
Nickel		13800	489	1630	ug/kg	99.4	1					
Potassium		1060000	20900	81500	ug/kg	99.4	1					
Selenium	U	ND	1630	9780	ug/kg	99.4	1					
Sodium	J	71500	22800	81500	ug/kg	99.4	1					
Vanadium		62100	326	1630	ug/kg	99.4	1					
Zinc		67300	1300	6520	ug/kg	99.4	1					
Silver	U	ND	3260	16300	ug/kg	99.4	10	TXT1	12/10/19	1221	1944141	4
Thallium	U	ND	16300	65200	ug/kg	99.4	10					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		72.1	6.27	43.9	ug/kg	95.6	2	PRB	12/12/19	0842	1945910	5
Uranium-238		4470	41.4	125	ug/kg	95.6	2					
Uranium-234	U	ND	6.27	31.4	ug/kg	95.6	2	PRB	12/12/19	1106	1945910	6
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
 Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"	Project: WNUC01519
Sample ID: 497772014	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		750	12.7	35.4	mg/kg	43.1	5	KLP1	12/03/19	1115	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219	Project: WNUC01519
Sample ID: 497772015	Client ID: WNUC009
Matrix: Water	
Collect Date: 22-NOV-19 13:20	
Receive Date: 27-NOV-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	JLD1	11/27/19	2226	1943917	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1036	1945742	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	JWJ	12/04/19	2018	1943988	3
Antimony	J	5.26	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1	JWJ	12/05/19	1257	1943988	4
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1353	1945540	5
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1513	1945540	6
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219
Sample ID: 497772015

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	U	ND	0.017	0.050	mg/L	1.00	1	KLP1	12/03/19	1024	1943955	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/02/19	1615	1943954
SW846 3005A	SW846 3005A for 6010D	HH1	12/02/19	1800	1943987
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3005A/6010D	
5	SW846 3010A/6020B	
6	SW846 3010A/6020B	
7	EPA 350.1	

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: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-38 0	Project: WNUC01519
Sample ID: 497772001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 72.2%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		3.26	+/-0.426	0.116	0.500	pCi/g			EXC2	12/05/19	0625	1944518	1
Uranium-235/236		0.204	+/-0.126	0.0978	0.500	pCi/g							
Uranium-238		1.68	+/-0.306	0.0873	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	16.5	+/-16.8	28.2	50.0	pCi/g			JJ3	12/08/19	0537	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			86.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-39 0"-6"	Project: WNUC01519
Sample ID: 497772002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 15:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 42.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.86	+/-0.308	0.103	0.500	pCi/g			EXC2	12/05/19	0625	1944518	1
Uranium-235/236	U	0.0122	+/-0.0458	0.077	0.500	pCi/g							
Uranium-238		1.70	+/-0.293	0.0623	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-7.74	+/-14.5	25.8	50.0	pCi/g		JJ3	12/08/19	0553	1944223		2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			91.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.1	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"	Project: WNUC01519
Sample ID: 497772003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 12:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 47.3%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		1.90	+/-0.273	0.0756	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.131	+/-0.0851	0.0689	0.500	pCi/g							
Uranium-238		1.24	+/-0.222	0.078	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-0.48	+/-15.4	26.9	50.0	pCi/g			JJ3	12/08/19	0610	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
 Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"	Project: WNUC01519
Sample ID: 497772004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 65.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.72	+/-0.277	0.0914	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236	U	0.0394	+/-0.0638	0.0987	0.500	pCi/g							
Uranium-238		1.41	+/-0.249	0.0341	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.995	+/-15.1	26.2	50.0	pCi/g			JJ3	12/08/19	0626	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			94.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-42 0"-6"	Project: WNUC01519
Sample ID: 497772005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:35	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 81.3%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		6.12	+/-0.550	0.105	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.285	+/-0.135	0.0474	0.500	pCi/g							
Uranium-238		2.23	+/-0.333	0.0708	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	5.94	+/-12.3	21.1	50.0	pCi/g			JJ3	12/08/19	0643	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			86.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-43 0"-6"	Project: WNUC01519
Sample ID: 497772006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 12:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 83.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		47.5	+/-1.61	0.115	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		2.32	+/-0.398	0.097	0.500	pCi/g							
Uranium-238		12.1	+/-0.813	0.0865	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-3.67	+/-12.3	21.7	50.0	pCi/g			JJ3	12/08/19	0700	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.8	(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	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-44 0"-6"	Project: WNUC01519
Sample ID: 497772007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 11:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.8%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		8.86	+/-0.648	0.0891	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.377	+/-0.152	0.073	0.500	pCi/g							
Uranium-238		2.62	+/-0.353	0.0682	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	6.23	+/-12.9	22.0	50.0	pCi/g			JJ3	12/08/19	0716	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"	Project: WNUC01519
Sample ID: 497772008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 15:25	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.4%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		5.86	+/-0.543	0.120	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.268	+/-0.134	0.0768	0.500	pCi/g							
Uranium-238		2.20	+/-0.333	0.0854	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	2.83	+/-11.3	19.5	50.0	pCi/g			JJ3	12/08/19	0733	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"	Project: WNUC01519
Sample ID: 497772009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 68.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		4.02	+/-0.496	0.158	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.179	+/-0.127	0.118	0.500	pCi/g							
Uranium-238		2.15	+/-0.363	0.126	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.62	+/-11.0	19.4	50.0	pCi/g			JJ3	12/08/19	0749	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

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

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

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-47 0"-6"	Project: WNUC01519
Sample ID: 497772010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 10:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 77.1%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		3.18	+/-0.441	0.147	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.232	+/-0.143	0.127	0.500	pCi/g							
Uranium-238		1.46	+/-0.302	0.140	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-3.87	+/-13.9	24.4	50.0	pCi/g			JJ3	12/08/19	0806	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-48 0"-6"	Project: WNUC01519
Sample ID: 497772011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 63.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.57	+/-0.445	0.154	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.091	+/-0.107	0.116	0.500	pCi/g							
Uranium-238		1.98	+/-0.392	0.152	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-8.79	+/-17.5	31.0	50.0	pCi/g			JJ3	12/08/19	0823	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			84.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			103	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"	Project: WNUC01519
Sample ID: 497772012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 67.8%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		2.43	+/-0.383	0.132	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.0144	+/-0.054	0.0908	0.500	pCi/g							
Uranium-238		1.62	+/-0.311	0.0849	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-8.16	+/-13.7	24.5	50.0	pCi/g			JJ3	12/08/19	0839	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			98.4	(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	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

Client Sample ID: SED-49 0"-6"	Project: WNUC01519
Sample ID: 497772013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 13:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 73.9%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		4.59	+/-0.557	0.126	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.215	+/-0.140	0.0646	0.500	pCi/g							
Uranium-238		2.11	+/-0.377	0.0522	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-5.34	+/-14.4	25.4	50.0	pCi/g			JJ3	12/08/19	0856	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			81.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"	Project: WNUC01519
Sample ID: 497772014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 14:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 69.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.64	+/-0.486	0.115	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.104	+/-0.109	0.136	0.500	pCi/g							
Uranium-238		1.86	+/-0.349	0.110	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.910	+/-15.0	26.1	50.0	pCi/g		JJ3	12/08/19	0912	1944223		2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

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"			87.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 12, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219 Project: WNUC01519
Sample ID: 497772015 Client ID: WNUC009
Matrix: Water
Collect Date: 22-NOV-19 13:20
Receive Date: 27-NOV-19
Collector: Client

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		EXC2	12/03/19	1208	1944519	1	
Uranium-233/234	U	-0.0603	+/-0.125	0.304	0.500	pCi/L							
Uranium-235/236	U	-0.000315	+/-0.103	0.222	0.500	pCi/L							
Uranium-238	U	-0.0648	+/-0.118	0.295	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-17.4	+/-25.4	45.4	50.0	pCi/L		JJ3	12/08/19	0756	1944224	2
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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, Liquid "As Received"			68.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "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 Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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QC Summary

Report Date: December 12, 2019

Page 1 of 21

Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1943917										
QC1204443887	497428002	DUP									
Fluoride		0.368		0.360	mg/L	2.06 ^		(+/-0.100)	JLD1	11/28/19	00:56
QC1204443886	LCS										
Fluoride	2.50			2.47	mg/L		98.6	(90%-110%)		11/28/19	00:26
QC1204443885	MB										
Fluoride			U	ND	mg/L					11/27/19	23:56
QC1204443888	497428002	PS									
Fluoride	2.50	0.368		2.92	mg/L		102	(90%-110%)		11/28/19	01:26
Batch	1944127										
QC1204444269	497413020	DUP									
Fluoride		1.60		1.91	mg/kg	18 ^		(+/-1.54)	CH5	11/30/19	01:42
QC1204444270	497772001	DUP									
Fluoride		5.17		5.25	mg/kg	1.41 ^		(+/-3.64)		11/30/19	03:12
QC1204444268	LCS										
Fluoride	24.6			24.7	mg/kg		100	(90%-110%)		11/30/19	00:43
QC1204444267	MB										
Fluoride			U	ND	mg/kg					11/30/19	00:13
QC1204444271	497413020	MS									
Fluoride	37.9	1.60		15.5	mg/kg		36.7 *	(75%-125%)		11/30/19	02:12
QC1204444272	497772001	MS									
Fluoride	90.0	5.17		45.9	mg/kg		45.3 *	(75%-125%)		11/30/19	03:42

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QC Summary

Workorder: 497772

Page 2 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1945540										
QC1204447630		LCS									
Uranium-235	0.360			0.370	ug/L		103	(80%-120%)	PRB	12/11/19	13:50
Uranium-238	49.6			50.9	ug/L		103	(80%-120%)			
QC1204447651		LCS									
Uranium-234	0.550			0.611	ug/L		111	(80%-120%)		12/11/19	15:09
QC1204447631		LCSD									
Uranium-235	0.360			0.386	ug/L	4.02	107	(0%-20%)		12/11/19	13:52
Uranium-238	49.6			52.8	ug/L	3.63	106	(0%-20%)			
QC1204447652		LCSD									
Uranium-234	0.550			0.587	ug/L	4.01	107	(0%-20%)		12/11/19	15:11
QC1204447629		MB									
Uranium-234			U	ND	ug/L					12/11/19	15:07
Uranium-235			U	ND	ug/L					12/11/19	13:48
Uranium-238			U	ND	ug/L						
QC1204447632		497772015	SDILT								
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	15:15
Uranium-235	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	13:55
Uranium-238	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Batch	1945910										
QC1204448520		LCS									
Uranium-235	34.2			32.3	ug/kg		94.5	(80%-120%)	PRB	12/12/19	08:04

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QC Summary

Workorder: 497772

Page 3 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1945910										
Uranium-238	4720			4580	ug/kg		97	(80%-120%)	PRB	12/12/19	08:04
QC1204448521	LCS										
Uranium-234	52.9			54.0	ug/kg		102	(80%-120%)		12/12/19	10:24
QC1204448519	MB										
Uranium-234			U	ND	ug/kg					12/12/19	10:22
Uranium-235			U	ND	ug/kg					12/12/19	08:02
Uranium-238			U	ND	ug/kg						
QC1204448522	497772003 MS										
Uranium-235	68.0	28.4		111	ug/kg		122	(75%-125%)		12/12/19	08:11
Uranium-238	9370	3020		12800	ug/kg		105	(75%-125%)			
QC1204448523	497772003 MS										
Uranium-234	97.4	U	ND	119	ug/kg		121	(75%-125%)		12/12/19	10:32
QC1204448524	497772014 MS										
Uranium-235	111	72.1		166	ug/kg		84.7	(75%-125%)		12/12/19	08:44
Uranium-238	15200	4470		18500	ug/kg		91.9	(75%-125%)			
QC1204448525	497772014 MS										
Uranium-234	177	U	ND	184	ug/kg		104	(75%-125%)		12/12/19	11:08
QC1204448526	497772003 MSD										
Uranium-235	65.5	28.4		90.8	ug/kg	20.4*	95.3	(0%-20%)		12/12/19	08:13
Uranium-238	9030	3020		11600	ug/kg	10.3	94.6	(0%-20%)			

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QC Summary

Workorder: 497772

Page 4 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1945910										
QC1204448527	497772003	MSD									
Uranium-234	98.7	U	ND	115	ug/kg	3.27	116	(0%-20%)	PRB	12/12/19	10:34
QC1204448528	497772014	MSD									
Uranium-235	112		72.1	187	ug/kg	12	103	(0%-20%)		12/12/19	08:45
Uranium-238	15500		4470	19600	ug/kg	5.56	97.6	(0%-20%)			
QC1204448529	497772014	MSD									
Uranium-234	166	U	ND	190	ug/kg	3.06	114	(0%-20%)		12/12/19	11:10
QC1204448530	497772003	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/12/19	10:36
Uranium-235			0.0817	J	0.0148	ug/L	9.42	(0%-20%)		12/12/19	08:16
Uranium-238			8.69		1.54	ug/L	11.2	(0%-20%)			
QC1204448531	497772014	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/12/19	11:12
Uranium-235			0.115	J	0.0209	ug/L	9.05	(0%-20%)		12/12/19	08:49
Uranium-238			7.13		1.33	ug/L	6.99	(0%-20%)			
Metals Analysis-ICP											
Batch	1943988										
QC1204444022	LCS										
Aluminum	5000			4770	ug/L		95.3	(80%-120%)	JWJ	12/04/19	20:13
Antimony	500			533	ug/L		107	(80%-120%)			
Arsenic	500			491	ug/L		98.2	(80%-120%)			

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QC Summary

Workorder: 497772

Page 5 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Barium	500			492	ug/L		98.4	(80%-120%)	JWJ	12/04/19	20:13
Beryllium	500			503	ug/L		101	(80%-120%)			
Cadmium	500			486	ug/L		97.2	(80%-120%)			
Calcium	5000			4960	ug/L		99.2	(80%-120%)			
Chromium	500			491	ug/L		98.2	(80%-120%)			
Cobalt	500			527	ug/L		105	(80%-120%)			
Copper	500			487	ug/L		97.4	(80%-120%)			
Iron	5000			5020	ug/L		100	(80%-120%)			
Lead	500			489	ug/L		97.8	(80%-120%)			
Magnesium	5000			5000	ug/L		100	(80%-120%)			
Manganese	500			469	ug/L		93.8	(80%-120%)			
Nickel	500			489	ug/L		97.7	(80%-120%)			
Potassium	5000			5290	ug/L		106	(80%-120%)		12/05/19	12:52
Selenium	500			497	ug/L		99.4	(80%-120%)			
Silver	100			97.2	ug/L		97.2	(80%-120%)		12/04/19	20:13

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QC Summary

Workorder: 497772

Page 6 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Sodium	5000			4690	ug/L		93.8	(80%-120%)	JWJ	12/04/19	20:13
Thallium	500			472	ug/L		94.3	(80%-120%)			
Vanadium	500			489	ug/L		97.8	(80%-120%)			
Zinc	500			473	ug/L		94.5	(80%-120%)			
QC1204444023	LCSD										
Aluminum	5000			4820	ug/L	1.14	96.4	(0%-20%)		12/04/19	20:15
Antimony	500			532	ug/L	0.242	106	(0%-20%)			
Arsenic	500			487	ug/L	0.755	97.4	(0%-20%)			
Barium	500			496	ug/L	0.872	99.2	(0%-20%)			
Beryllium	500			507	ug/L	0.816	101	(0%-20%)			
Cadmium	500			484	ug/L	0.313	96.9	(0%-20%)			
Calcium	5000			4930	ug/L	0.68	98.5	(0%-20%)			
Chromium	500			483	ug/L	1.69	96.5	(0%-20%)			
Cobalt	500			524	ug/L	0.693	105	(0%-20%)			
Copper	500			486	ug/L	0.335	97.1	(0%-20%)			
Iron	5000			5010	ug/L	0.108	100	(0%-20%)			

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QC Summary

Workorder: 497772

Page 7 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Lead	500			491	ug/L	0.416	98.2	(0%-20%)	JWJ	12/04/19	20:15
Magnesium	5000			5020	ug/L	0.487	100	(0%-20%)			
Manganese	500			468	ug/L	0.271	93.5	(0%-20%)			
Nickel	500			488	ug/L	0.158	97.6	(0%-20%)			
Potassium	5000			5360	ug/L	1.24	107	(0%-20%)		12/05/19	12:54
Selenium	500			493	ug/L	0.81	98.6	(0%-20%)			
Silver	100			97.2	ug/L	0.0072	97.2	(0%-20%)		12/04/19	20:15
Sodium	5000			4820	ug/L	2.61	96.3	(0%-20%)			
Thallium	500			498	ug/L	5.41	99.6	(0%-20%)			
Vanadium	500			486	ug/L	0.56	97.2	(0%-20%)			
Zinc	500			471	ug/L	0.258	94.3	(0%-20%)			
QC1204444021	MB										
Aluminum			U	ND	ug/L					12/04/19	20:09
Antimony			J	9.71	ug/L						
Arsenic			U	ND	ug/L						
Barium			U	ND	ug/L						

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QC Summary

Workorder: 497772

Page 8 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Beryllium			U	ND	ug/L				JWJ	12/04/19	20:09
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium				5.35	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						
Manganese			U	ND	ug/L						
Nickel			J	2.29	ug/L						
Potassium			U	ND	ug/L					12/05/19	12:48
Selenium			U	ND	ug/L						
Silver			U	ND	ug/L					12/04/19	20:09
Sodium			U	ND	ug/L						

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QC Summary

Workorder: 497772

Page 9 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Thallium			U	ND	ug/L				JWJ	12/04/19	20:09
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204444024 497772015 SDILT											
Aluminum	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	20:22
Antimony	J	5.26	U	ND	ug/L	N/A		(0%-20%)			
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Copper	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			

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QC Summary

Workorder: 497772

Page 10 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1943988										
Magnesium	U	ND	U	ND	ug/L	N/A		(0%-20%)	JWJ	12/04/19	20:22
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Nickel	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	13:00
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	20:22
Sodium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	U	ND	U	ND	ug/L	N/A		(0%-20%)			

Batch 1944141
 QC1204444293 LCS

Aluminum	461000			448000	ug/kg		97.1	(80%-120%)	TXT1	12/09/19	20:25
Antimony	46100			43800	ug/kg		95	(80%-120%)			
Arsenic	46100			42000	ug/kg		91.1	(80%-120%)			
Barium	46100			44400	ug/kg		96.3	(80%-120%)			
Beryllium	46100			45000	ug/kg		97.6	(80%-120%)			

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

QC Summary

Workorder: 497772

Page 11 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Cadmium	46100			44100	ug/kg		95.6	(80%-120%)	TXT1	12/09/19	20:25
Calcium	461000			450000	ug/kg		97.5	(80%-120%)			
Chromium	46100			44100	ug/kg		95.6	(80%-120%)			
Cobalt	46100			44600	ug/kg		96.8	(80%-120%)			
Copper	46100			45500	ug/kg		98.6	(80%-120%)			
Iron	461000			442000	ug/kg		95.7	(80%-120%)			
Lead	46100			44400	ug/kg		96.2	(80%-120%)			
Magnesium	461000			445000	ug/kg		96.5	(80%-120%)			
Manganese	46100			44100	ug/kg		95.6	(80%-120%)			
Nickel	46100			44400	ug/kg		96.2	(80%-120%)			
Potassium	461000			444000	ug/kg		96.3	(80%-120%)			
Selenium	46100			42700	ug/kg		92.6	(80%-120%)			
Silver	9230			8800	ug/kg		95.4	(80%-120%)			
Sodium	461000			434000	ug/kg		94.1	(80%-120%)			
Thallium	46100			44800	ug/kg		97	(80%-120%)			

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QC Summary

Workorder: 497772

Page 12 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Vanadium	46100			44600	ug/kg		96.8	(80%-120%)	TXT1	12/09/19	20:25
Zinc	46100			43500	ug/kg		94.2	(80%-120%)			
QC1204444292	MB										
Aluminum			U	ND	ug/kg					12/09/19	20:21
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						

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

QC Summary

Workorder: 497772

Page 13 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Manganese			U	ND	ug/kg				TXT1	12/09/19	20:21
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Sodium			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204444294 497772003 MS											
Aluminum	896000	20800000		32600000	ug/kg		N/A	(75%-125%)		12/09/19	20:31
Antimony	89600	U	ND	69400	ug/kg		77.5	(75%-125%)			
Arsenic	89600	J	3470	75100	ug/kg		79.9	(75%-125%)			
Barium	89600		137000	225000	ug/kg		99.2	(75%-125%)			
Beryllium	89600		1470	83400	ug/kg		91.4	(75%-125%)			
Cadmium	89600	U	ND	78300	ug/kg		87.4	(75%-125%)			

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QC Summary

Workorder: 497772

Page 14 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Calcium	896000	429000		1370000	ug/kg		105	(75%-125%)	TXT1	12/09/19	20:31
Chromium	89600	26500		107000	ug/kg		89.5	(75%-125%)			
Cobalt	89600	10000		90700	ug/kg		90.1	(75%-125%)			
Copper	89600	19600		107000	ug/kg		98	(75%-125%)			
Iron	896000	16100000		16100000	ug/kg		N/A	(75%-125%)			
Lead	89600	20400		102000	ug/kg		90.6	(75%-125%)			
Magnesium	896000	2700000		3480000	ug/kg		86.8	(75%-125%)			
Manganese	89600	250000		352000	ug/kg		114	(75%-125%)			
Nickel	89600	11300		94900	ug/kg		93.3	(75%-125%)			
Potassium	896000	1420000		2250000	ug/kg		92.9	(75%-125%)			
Selenium	89600	U	ND	73800	ug/kg		81.9	(75%-125%)			
Silver	17900	U	ND	16400	ug/kg		91.6	(75%-125%)		12/10/19	11:35
Sodium	896000	48500		860000	ug/kg		90.6	(75%-125%)		12/09/19	20:31
Thallium	89600	U	ND	74900	ug/kg		83.6	(75%-125%)		12/10/19	11:35
Vanadium	89600	62700		137000	ug/kg		82.6	(75%-125%)		12/09/19	20:31

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QC Summary

Workorder: 497772

Page 15 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Zinc	89600	49200		135000	ug/kg		95.6	(75%-125%)	TXT1	12/09/19	20:31
QC1204444295 497772003 MSD											
Aluminum	878000	20800000		16800000	ug/kg	63.8*	N/A	(0%-20%)		12/09/19	20:33
Antimony	87800	U	ND	69800	ug/kg	0.597	79.6	(0%-20%)			
Arsenic	87800	J	3470	76000	ug/kg	1.18	82.6	(0%-20%)			
Barium	87800		137000	201000	ug/kg	11.3	73.9*	(0%-20%)			
Beryllium	87800		1470	82600	ug/kg	0.886	92.5	(0%-20%)			
Cadmium	87800	U	ND	78100	ug/kg	0.217	89	(0%-20%)			
Calcium	878000		429000	1180000	ug/kg	14.8	85.8	(0%-20%)			
Chromium	87800		26500	99800	ug/kg	6.68	83.5	(0%-20%)			
Cobalt	87800		10000	89100	ug/kg	1.85	90.1	(0%-20%)			
Copper	87800		19600	101000	ug/kg	6.06	92.9	(0%-20%)			
Iron	878000		16100000	16100000	ug/kg	0.446	N/A	(0%-20%)			
Lead	87800		20400	98900	ug/kg	2.72	89.4	(0%-20%)			
Magnesium	878000		2700000	3400000	ug/kg	2.11	80.3	(0%-20%)			
Manganese	87800		250000	325000	ug/kg	7.97	85.6	(0%-20%)			

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QC Summary

Workorder: 497772

Page 16 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Nickel	87800	11300		88800	ug/kg	6.66	88.3	(0%-20%)	TXT1	12/09/19	20:33
Potassium	878000	1420000		2210000	ug/kg	1.96	89.8	(0%-20%)			
Selenium	87800	U	ND	75700	ug/kg	2.45	85.7	(0%-20%)			
Silver	17600	U	ND	15400	ug/kg	6.25	87.8	(0%-20%)		12/10/19	11:38
Sodium	878000	48500		839000	ug/kg	2.5	90.1	(0%-20%)		12/09/19	20:33
Thallium	87800	U	ND	74900	ug/kg	0.098	85.4	(0%-20%)		12/10/19	11:38
Vanadium	87800	62700		137000	ug/kg	0.137	84.2	(0%-20%)		12/09/19	20:33
Zinc	87800	49200		123000	ug/kg	9.39	83.8	(0%-20%)			
QC1204451583 497772003 PS											
Barium	500	785		1220	ug/L		87.2	(75%-125%)		12/09/19	20:35
QC1204444296 497772003 SDILT											
Aluminum		120000		25500	ug/L	6.47		(0%-20%)		12/09/19	20:37
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	20.0	J	5.43	ug/L	36	(0%-20%)			
Barium			785		168	ug/L	6.77	(0%-20%)			
Beryllium			8.44	J	1.73	ug/L	2.35	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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

QC Summary

Workorder: 497772

Page 17 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Calcium		2460		526	ug/L	6.69		(0%-20%)	TXT1	12/09/19	20:37
Chromium		152		32.3	ug/L	6.21		(0%-20%)			
Cobalt		57.5		12.5	ug/L	8.99		(0%-20%)			
Copper		113		23.7	ug/L	4.85		(0%-20%)			
Iron		92800		20000	ug/L	7.53		(0%-20%)			
Lead		117		25.4	ug/L	8.04		(0%-20%)			
Magnesium		15500		3320	ug/L	6.92		(0%-20%)			
Manganese		1440		308	ug/L	7.1		(0%-20%)			
Nickel		65.1		14.2	ug/L	9.45		(0%-20%)			
Potassium		8150		1740	ug/L	6.9		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/10/19	11:44
Sodium		279	U	ND	ug/L	N/A		(0%-20%)		12/09/19	20:37
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/10/19	11:44
Vanadium		361		75.5	ug/L	4.68		(0%-20%)		12/09/19	20:37

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

QC Summary

Workorder: 497772

Page 18 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1944141										
Zinc		283		61.6	ug/L	8.83		(0%-20%)	TXT1	12/09/19	20:37
Metals Analysis-Mercury											
Batch	1945742										
QC1204448131	496108001	DUP									
Mercury	U	ND	U	ND	ug/L	N/A			CW2	12/06/19	09:56
QC1204448127	LCS										
Mercury	2.00			2.03	ug/L		102	(80%-120%)		12/06/19	09:53
QC1204448126	MB										
Mercury			U	ND	ug/L					12/06/19	09:51
QC1204448132	496108001	MS									
Mercury	2.00	U	ND	1.94	ug/L		97.1	(75%-125%)		12/06/19	09:58
QC1204448133	496108001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		12/06/19	09:59
Batch	1946177										
QC1204449153	497772003	DUP									
Mercury	J	55.5	J	58.4	ug/kg	5.09	^	(+/-80.8)	MTM1	12/09/19	10:50
QC1204449157	497772014	DUP									
Mercury	J	108	J	101	ug/kg	6.4	^	(+/-156)		12/09/19	11:22
QC1204449152	LCS										
Mercury	224			210	ug/kg		93.7	(80%-120%)		12/09/19	10:43
QC1204449151	MB										
Mercury			U	ND	ug/kg					12/09/19	10:42

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QC Summary

Workorder: 497772

Page 19 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 1946177											
QC1204449154	497772003	MS									
Mercury	427	J	55.5	463	ug/kg		95.5	(80%-120%)	MTM1	12/09/19	10:52
QC1204449158	497772014	MS									
Mercury	708	J	108	719	ug/kg		86.4	(80%-120%)		12/09/19	11:24
QC1204449155	497772003	SDILT									
Mercury		J	0.262	U	ND	ug/L	N/A	(0%-10%)		12/09/19	10:53
QC1204449159	497772014	SDILT									
Mercury		J	0.275	U	ND	ug/L	N/A	(0%-10%)		12/09/19	11:25
Nutrient Analysis											
Batch 1943955											
QC1204443947	497694001	DUP									
Nitrogen, Ammonia			0.079	0.0888	mg/L	11.7	^	(+/-0.025)	KLP1	12/03/19	10:22
QC1204443945	LCS										
Nitrogen, Ammonia	1.00			0.989	mg/L		98.9	(90%-110%)		12/03/19	10:08
QC1204443944	MB										
Nitrogen, Ammonia			U	ND	mg/L					12/03/19	10:07
QC1204443949	497694001	MS									
Nitrogen, Ammonia	1.00		0.079	1.12	mg/L		104	(90%-110%)		12/03/19	10:23
Batch 1943957											
QC1204443952	497772003	DUP									
Nitrogen, Ammonia			242	295	mg/kg	19.7		(0%-20%)	KLP1	12/03/19	11:01
QC1204443953	497772014	DUP									
Nitrogen, Ammonia			750	885	mg/kg	16.6		(0%-20%)		12/03/19	11:16

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QC Summary

Workorder: 497772

Page 20 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Nutrient Analysis											
Batch	1943957										
QC1204443951		LCS									
Nitrogen, Ammonia	50.0			51.0	mg/kg		102	(90%-110%)	KLP1	12/03/19	10:33
QC1204443950		MB									
Nitrogen, Ammonia			U	ND	mg/kg					12/03/19	10:32
QC1204443954		497772003	MS								
Nitrogen, Ammonia	66.9		242	395	mg/kg		228*	(90%-110%)		12/03/19	11:02
QC1204443955		497772014	MS								
Nitrogen, Ammonia	117		750	949	mg/kg		N/A	(90%-110%)		12/03/19	11:17

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- 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 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.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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

QC Summary

Workorder: 497772

Page 21 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Y											
Z											
^											
d											
e											
h											

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

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

QC Summary

Report Date: December 12, 2019

Page 1 of 4

Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1944518										
QC1204445235	497772003 DUP										
Uranium-233/234		1.90		2.11	pCi/g	10.6		(0%-20%)	EXC2	12/05/19	09:21
	Uncertainty	+/-0.273		+/-0.357							
Uranium-235/236		0.131		0.181	pCi/g	32.2		(0% - 100%)			
	Uncertainty	+/-0.0851		+/-0.125							
Uranium-238		1.24		1.47	pCi/g	17.2		(0%-20%)			
	Uncertainty	+/-0.222		+/-0.299							
QC1204445236	497772014 DUP										
Uranium-233/234		3.64		3.29	pCi/g	10.2		(0%-20%)		12/05/19	13:10
	Uncertainty	+/-0.486		+/-0.445							
Uranium-235/236	U	0.104		0.248	pCi/g	58.2		(0% - 100%)			
	Uncertainty	+/-0.109		+/-0.140							
Uranium-238		1.86		1.69	pCi/g	9.65		(0%-20%)			
	Uncertainty	+/-0.349		+/-0.319							
QC1204445237	LCS										
Uranium-233/234				4.74	pCi/g					12/05/19	13:10
	Uncertainty			+/-0.547							
Uranium-235/236				0.197	pCi/g						
	Uncertainty			+/-0.132							
Uranium-238		5.13		5.44	pCi/g		106	(75%-125%)			
	Uncertainty			+/-0.587							
QC1204445234	MB										
Uranium-233/234			U	0.0698	pCi/g					12/06/19	08:57
	Uncertainty			+/-0.0749							
Uranium-235/236			U	0.0312	pCi/g						
	Uncertainty			+/-0.0613							
Uranium-238			U	0.0361	pCi/g						
	Uncertainty			+/-0.0574							

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QC Summary

Workorder: 497772

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1944519										
QC1204445242	LCS			0.640	percent				EXC2	12/03/19	12:08
Pct Uranium-235											
Uranium-233/234				13.6	pCi/L						
	Uncertainty			+/-1.03							
Uranium-235/236				0.605	pCi/L						
	Uncertainty			+/-0.249							
Uranium-238	13.6			14.6	pCi/L		107	(75%-125%)			
	Uncertainty			+/-1.06							
QC1204445243	LCSD			0.673	percent	4.93				12/03/19	12:08
Pct Uranium-235											
Uranium-233/234				13.9	pCi/L	1.74					
	Uncertainty			+/-1.03							
Uranium-235/236				0.640	pCi/L	5.67					
	Uncertainty			+/-0.252							
Uranium-238	13.6			14.7	pCi/L	0.661	108	(0%-20%)			
	Uncertainty			+/-1.06							
QC1204445241	MB			0.00	percent					12/03/19	12:08
Pct Uranium-235			U								
Uranium-233/234			U	-0.046	pCi/L						
	Uncertainty			+/-0.0963							
Uranium-235/236			U	0.0141	pCi/L						
	Uncertainty			+/-0.0886							
Uranium-238			U	-0.0354	pCi/L						
	Uncertainty			+/-0.102							
Rad Liquid Scintillation											
Batch	1944223										
QC1204444524	497772014		DUP								
Technetium-99	U	0.910	U	-4.2	pCi/g	N/A			N/A	JJ3	12/08/19 09:45
	Uncertainty	+/-15.0		+/-17.6							

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

QC Summary

Workorder: 497772

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1944223										
QC1204444525	497772003 DUP										
Technetium-99	U	-0.48	U	0.661	pCi/g	N/A		N/A	JJ3	12/08/19	10:02
	Uncertainty	+/-15.4		+/-16.7							
QC1204444526	LCS										
Technetium-99	319			273	pCi/g		85.6	(75%-125%)		12/08/19	10:19
	Uncertainty			+/-18.7							
QC1204444523	MB										
Technetium-99			U	-7.54	pCi/g					12/08/19	09:29
	Uncertainty			+/-11.1							
Batch	1944224										
QC1204444531	LCS										
Technetium-99	854			748	pCi/L		87.6	(75%-125%)	JJ3	12/08/19	08:30
	Uncertainty			+/-47.8							
QC1204444532	LCSD										
Technetium-99	854			724	pCi/L	3.33	84.7	(0%-20%)		12/08/19	08:46
	Uncertainty			+/-47.4							
QC1204444530	MB										
Technetium-99			U	-11	pCi/L					12/08/19	08:13
	Uncertainty			+/-25.6							

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
- 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.

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

QC Summary

Workorder: 497772

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 #: 497772

Metals

Product: Determination of Metals by ICP

Analytical Method: SW846 3005A/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1943988

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 1943987

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204444021	Method Blank (MB)ICP
1204444022	Laboratory Control Sample (LCS)
1204444023	Laboratory Control Sample Duplicate (LCSD)
1204444024	497772015(EB-01-112219L) Serial Dilution (SD)

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.

Quality Control (QC) Information

Method Blank (MB) Statement

The samples in this SDG did not contain the above noted analytes at concentrations higher than the RDL, therefore the data was not adversely affected.

Sample	Analyte	Value
1204444021 (MB)	Chromium	5.35 * 10 > .116

Laboratory Control Sample Duplicate (LCSD)

An LCSD was used in place of matrix QC due to the designation of field QC.

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1944141

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1944140

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444292	Method Blank (MB)ICP
1204444293	Laboratory Control Sample (LCS)
1204444296	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204444294	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204444295	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204451583	497772003(SED-40 0"-6"PS) 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.

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 analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204444295 (SED-40 0"-6"MSD)	Barium	73.9* (75%-125%)

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204444294MS and 1204444295MSD (SED-40 0"-6")	Aluminum	RPD 63.8* (0%-20%)

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. Samples required dilutions in order to minimize suppression of silver and thallium, due to matrix interferences. 497772001 (SED-38 0), 497772002 (SED-39 0"-6"), 497772003 (SED-40 0"-6"), 497772004 (SED-41 0"-6"), 497772005 (SED-42 0"-6"), 497772007 (SED-44 0"-6"), 497772008 (SED-45 0"-6"), 497772009 (SED-46 0"-6"), 497772011 (SED-48 0"-6") and 497772014 (SED-50 0"-6"). Samples required dilutions in order to minimize suppression of thallium, due to matrix interferences. 497772010 (SED-47 0"-6") and 497772012 (SED-48-DUP 0"-6").

Analyte	497772									
	001	002	003	004	005	007	008	009	010	011
Silver	10X	10X	10X	10X	10X	10X	10X	10X	1X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	497772	
	012	014
Silver	1X	10X
Thallium	10X	10X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3010A/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1945540

Preparation Method: SW846 3010A

Preparation Procedure: GL-MA-E-008 REV# 19

Preparation Batch: 1945539

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204447629	Method Blank (MB)ICP-MS
1204447630	Laboratory Control Sample (LCS)
1204447651	Laboratory Control Sample (LCS)
1204447631	Laboratory Control Sample Duplicate (LCSD)
1204447652	Laboratory Control Sample Duplicate (LCSD)
1204447632	497772015(EB-01-112219L) Serial Dilution (SD)

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.

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

Laboratory Control Sample Duplicate (LCSD)

An LCSD was used in place of matrix QC due to the designation of field QC.

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1945910

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1945906

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204448519	Method Blank (MB)ICP-MS
1204448520	Laboratory Control Sample (LCS)
1204448521	Laboratory Control Sample (LCS)
1204448530	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204448531	497772014(SED-50 0"-6"L) Serial Dilution (SD)
1204448522	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204448523	497772003(SED-40 0"-6"S) Matrix Spike (MS)

1204448524	497772014(SED-50 0"-6"S) Matrix Spike (MS)
1204448525	497772014(SED-50 0"-6"S) Matrix Spike (MS)
1204448526	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448527	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448528	497772014(SED-50 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448529	497772014(SED-50 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

MS/MSD Relative Percent Difference (RPD) Statement

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204448522MS and 1204448526MSD (SED-40 0"-6")	Uranium-235	RPD 20.4* (0%-20%)

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497772006 (SED-43 0"-6") was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497772									
	001	002	003	004	005	006	007	008	009	010
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	5X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497772			
	011	012	013	014
Uranium-234	2X	2X	2X	2X

Uranium-235	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 1945742

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 1945741

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204448126	Method Blank (MB)CVAA
1204448127	Laboratory Control Sample (LCS)
1204448133	496108001(NonSDGL) Serial Dilution (SD)
1204448131	496108001(NonSDGD) Sample Duplicate (DUP)
1204448132	496108001(NonSDGS) Matrix Spike (MS)

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: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7471A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 1946177

Preparation Method: SW846 7471A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 1946176

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"

497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204449151	Method Blank (MB)CVAA
1204449152	Laboratory Control Sample (LCS)
1204449155	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204449159	497772014(SED-50 0"-6"L) Serial Dilution (SD)
1204449153	497772003(SED-40 0"-6"D) Sample Duplicate (DUP)
1204449157	497772014(SED-50 0"-6"D) Sample Duplicate (DUP)
1204449154	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204449158	497772014(SED-50 0"-6"S) Matrix Spike (MS)

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.

General Chemistry

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batch: 1943917

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204443885	Method Blank (MB)
1204443886	Laboratory Control Sample (LCS)
1204443887	497428002(NonSDG) Sample Duplicate (DUP)
1204443888	497428002(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1204443887 (Non SDG 497428002DUP) and 1204443888 (Non SDG 497428002PS) were diluted because target analyte concentrations exceeded the calibration range. 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.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1944127 and 1944124

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444267	Method Blank (MB)
1204444268	Laboratory Control Sample (LCS)
1204444269	497413020(SED-37 6-12") Sample Duplicate (DUP)
1204444270	497772001(SED-38 0) Sample Duplicate (DUP)
1204444271	497413020(SED-37 6-12") Matrix Spike (MS)
1204444272	497772001(SED-38 0) 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	1204444271 (SED-37 6-12"MS)	36.7* (75%-125%)
	1204444272 (SED-38 0MS)	45.3* (75%-125%)

Miscellaneous Information

Manual Integrations

Sample 1204444268 (LCS) was manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1943955

Preparation Method: EPA 350.1 Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1943954

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204443944	Method Blank (MB)
1204443945	Laboratory Control Sample (LCS)
1204443947	497694001(NonSDG) Sample Duplicate (DUP)
1204443949	497694001(NonSDG) Matrix Spike (MS)

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: Ammonia Nitrogen

Preparation Method: EPA 350.1 Modified

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1943957

Preparation Method: EPA 350.2 Modified Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1943956

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"

497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204443950	Method Blank (MB)
1204443951	Laboratory Control Sample (LCS)
1204443952	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204443953	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204443954	497772003(SED-40 0"-6") Matrix Spike (MS)
1204443955	497772014(SED-50 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Nitrogen, Ammonia	1204443954 (SED-40 0"-6"MS)	228* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1204443952 (SED-40 0"-6"DUP), 1204443953 (SED-50 0"-6"DUP), 1204443954 (SED-40 0"-6"MS), 1204443955 (SED-50 0"-6"MS), 497772001 (SED-38 0), 497772002 (SED-39 0"-6"), 497772003 (SED-40 0"-6"), 497772004 (SED-41 0"-6"), 497772005 (SED-42 0"-6"), 497772006 (SED-43 0"-6"), 497772007 (SED-44 0"-6"), 497772008 (SED-45 0"-6"), 497772009 (SED-46 0"-6"), 497772010 (SED-47 0"-6"), 497772011 (SED-48 0"-6"), 497772012 (SED-48-DUP 0"-6") and 497772014 (SED-50 0"-6") were diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	497772									
	001	002	003	004	005	006	007	008	009	010
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	10X

Analyte	497772		
	011	012	014
Nitrogen, Ammonia	10X	10X	5X

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: 1944518

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1944026

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204445234	Method Blank (MB)
1204445235	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204445236	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204445237	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 1204445234 (MB) was recounted due to a peak shift. The recount is reported.

Product: Alphaspec U, Liquid

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1944519

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204445241	Method Blank (MB)
1204445242	Laboratory Control Sample (LCS)
1204445243	Laboratory Control Sample Duplicate (LCSD)

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: 1944026

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1944026

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444081	497772001(SED-38 0) 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: 1944223

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444523	Method Blank (MB)
1204444524	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204444525	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204444526	Laboratory Control Sample (LCS)

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, Liquid

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1944224

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204444530	Method Blank (MB)
1204444531	Laboratory Control Sample (LCS)
1204444532	Laboratory Control Sample Duplicate (LCSD)

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 2
 Project #: 60595649.9
 GEL Quote #:
 COC Number (1):
 PO Number:

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Chain of Custody and Analytical Request

GEL Work Order Number: 497772

Phone #: 803 647 1920

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

Fax #:

Preservative Type (6)

Client Name: WESTINGHOUSE
 Project/Site Name: RI IMPLEMENTATION
 Address: 5801 BUZZ RD HOPKINS SC 29061

Collected by: JAMES LEAPHANT
 Send Results To: DANA JOYNER

Comments
 Note: extra sample is required for sample specific QC

Sample ID * For composites - indicate start and stop date/time	Date Collected (mm-dd-yy)	Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (4)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (5)									
						Radioactive	TSCA Regulated		TAL METALS	AMMO/238U	FCO/232U	150T/238U	150T/232U	TECH/ACTIV				
SED-38 0:6"	11-22-19	1450	N	NO	SD	NO		1	X	X	X	X	X	X				
SED-39 0:6"		1520	N		SD			1	X	X	X	X	X	X				
SED-40 0:6"		1220	N		SD			1	X	X	X	X	X	X				
SED-40-MS 0:6"		1220	MS		SD			1	X	X	X	X	X	X				
SED-40-MSD 0:6"		1220	MSD		SD			1	X	X	X	X	X	X				
SED-41 0:6"	11-25-19	0830	N		SD			1	X	X	X	X	X	X				
SED-42 0:6"		0835	N		SD			1	X	X	X	X	X	X				
SED-43 0:6"		1220	P		SD			1	X	X	X	X	X	X				
SED-44 0:6"		1150	N		SD			1	X	X	X	X	X	X				
SED-45 0:6"		1525	N		SD			1	X	X	X	X	X	X				

TAT Requested: Normal: Rush: Specify: (Subject to Surcharges) Fax Results: Yes / No
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards
 NO

Chain of Custody Signatures		
Relinquished By (Signed)	Date	Time
J. Leaphant	11-27-19	0713
M. Joyner	11-27-19	0713
M. Joyner	11-27-19	1510

Method of Shipment:
 Date Shipped:
 Airbill #:
 Airbill #:

For Lab Receiving Use Only
 Custody Seal Intact?
 YES NO
 Cooler Temp:
 I C

WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

Page: 2 of 2
 Project #: 60595649.9
 GEL Quote #: _____
 GOC Number (1): _____
 GBO Number: _____

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Chain of Custody and Analytical Request

GEL Work Order Number: _____

Client Name: WESTINGHOUSE Phone #: 803 647 1920

Project/Site Name: RI IMPLEMENTATION Fax #: _____

Address: 5801 BLUFF RD HOPKINS SC 29061

Collected by: JAMES LEAPHART Send Results To: DANA JOYWEZ

Sample ID: _____
 * For composites - indicate start and stop date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Sample Analysis Requested (5) (Fill in the number of containers for each test)						Preservative Type (6)	Comments		
						TAL METALS	AMMONIA	FLUORIDE	ISOTOPIC URANIUM	TAL METALS	AMMONIA			FLUORIDE	ISOTOPIC URANIUM
SEP-46 0"-6"	11-25-19	1450	N	NO	SD	X	X	X	X	X	X	X	NS	NS	Note: extra sample is required for sample specific QC
SEP-47 0"-6"	11-26-19	1000	N		SD	X	X	X	X	X	X	X	NS	NS	
SEP-48 0"-6"		1130	N		SD	X	X	X	X	X	X	X	NS	NS	
SEP-48-DUP 0"-6"		1130	FD		SD	X	X	X	X	X	X	X	NS	NS	
SEP-49 0"-6"		1300	N		SD	X	X	X	X	X	X	X	NS	NS	
SEP-50 0"-6"		1400	N		SD	X	X	X	X	X	X	X	NS	NS	
SEP-50-MS 0"-6"		1400	MS		SD	X	X	X	X	X	X	X	NS	NS	
SEP-50-MSD 0"-6"		1400	MSD		SD	X	X	X	X	X	X	X	NS	NS	
EB-01-112219	11-22-19	1320	EB		W										

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharges) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Sample Collection Time Zone: Eastern / Pacific / Other _____

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards
 NO

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<u>J. Leaphart</u>	11-27-19	<u>SECURE LOCATION</u>	11-27-19	0713
<u>[Signature]</u>	11-27-19	<u>[Signature]</u>	11-27-19	0715
<u>[Signature]</u>	11-27-19	<u>[Signature]</u>	11-27-19	0715

GEL PM: _____ Method of Shipment: _____ Date Shipped: _____

Airbill #: _____

For Lab Receiving Use Only
 Custody Seal Intact? YES / NO
 Cooler Temp: _____

WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

List of current GEL Certifications as of 12 December 2019

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	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 11, 2019

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

Re: ENV-CONSENTA
Work Order: 498097

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 04, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

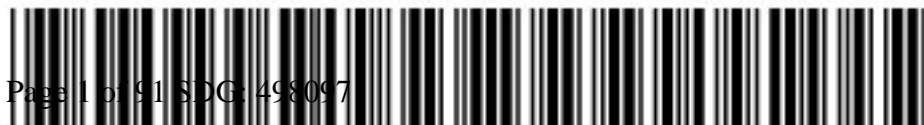
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without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

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

Sincerely,

Katelyn Gray for
Hope Taylor
Project Manager

Purchase Order: 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: 498097 GEL Work Order: 498097

The Qualifiers in this report are defined as follows:

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

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

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

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-51 6"-12" Project: WNUC01519
Sample ID: 498097001 Client ID: WNUC009
Matrix: Solid
Collect Date: 27-NOV-19 10:05
Receive Date: 04-DEC-19
Collector: Client
Moisture: 66%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.96	0.995	2.93	mg/kg	9.95	1	LXA2	12/06/19	0149	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	43.3	130	ug/kg	111	1	CW2	12/06/19	1035	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		19900000	19200	56600	ug/kg	96.2	1	TXT1	12/06/19	1708	1945551	3
Antimony	U	ND	933	5660	ug/kg	96.2	1					
Arsenic	J	3300	1410	8480	ug/kg	96.2	1					
Barium		191000	283	1410	ug/kg	96.2	1					
Beryllium		1930	283	1410	ug/kg	96.2	1					
Cadmium	U	ND	283	1410	ug/kg	96.2	1					
Chromium		26100	424	2830	ug/kg	96.2	1					
Cobalt		11500	424	1410	ug/kg	96.2	1					
Copper		20800	848	5660	ug/kg	96.2	1					
Iron		16100000	22600	70700	ug/kg	96.2	1					
Lead		17000	933	5660	ug/kg	96.2	1					
Magnesium		2810000	24000	84800	ug/kg	96.2	1					
Manganese		261000	566	2830	ug/kg	96.2	1					
Nickel		12000	424	1410	ug/kg	96.2	1					
Potassium		1560000	18100	70700	ug/kg	96.2	1					
Selenium	U	ND	1410	8480	ug/kg	96.2	1					
Vanadium		64800	283	1410	ug/kg	96.2	1					
Zinc		55700	1130	5660	ug/kg	96.2	1					
Silver	U	ND	2830	14100	ug/kg	96.2	10	TXT1	12/06/19	1711	1945551	4
Thallium	U	ND	14100	56600	ug/kg	96.2	10					
Calcium		304000	22600	70700	ug/kg	96.2	1	TXT1	12/09/19	1203	1945551	5
Sodium		82400	20100	71800	ug/kg	97.7	1	LS	12/10/19	1409	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	20.6	5.78	40.4	ug/kg	98.2	2	PRB	12/11/19	1407	1945538	7
Uranium-238		2450	38.1	116	ug/kg	98.2	2					
Uranium-234	U	ND	5.78	28.9	ug/kg	98.2	2	PRB	12/11/19	1529	1945538	8
Nutrient Analysis												

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-51 6"-12"
Sample ID: 498097001

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		401	10.0	27.9	mg/kg	37.9	5	KLP1	12/10/19	1053	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"	Project: WNUC01519
Sample ID: 498097002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 69.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.77	1.11	3.27	mg/kg	9.95	1	LXA2	12/06/19	0423	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	49.3	148	ug/kg	113	1	CW2	12/06/19	1036	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		20300000	19700	58000	ug/kg	88.3	1	TXT1	12/06/19	1713	1945551	3
Antimony	U	ND	957	5800	ug/kg	88.3	1					
Arsenic	J	2250	1450	8700	ug/kg	88.3	1					
Barium		98000	290	1450	ug/kg	88.3	1					
Beryllium	J	1170	290	1450	ug/kg	88.3	1					
Cadmium	U	ND	290	1450	ug/kg	88.3	1					
Chromium		25100	435	2900	ug/kg	88.3	1					
Cobalt		5300	435	1450	ug/kg	88.3	1					
Copper		19000	870	5800	ug/kg	88.3	1					
Iron		9550000	23200	72500	ug/kg	88.3	1					
Lead		24200	957	5800	ug/kg	88.3	1					
Magnesium		1940000	24700	87000	ug/kg	88.3	1					
Manganese		128000	580	2900	ug/kg	88.3	1					
Nickel		9140	435	1450	ug/kg	88.3	1					
Potassium		1120000	18600	72500	ug/kg	88.3	1					
Selenium	J	2000	1450	8700	ug/kg	88.3	1					
Silver	U	ND	290	1450	ug/kg	88.3	1					
Vanadium		54300	290	1450	ug/kg	88.3	1					
Zinc		34700	1160	5800	ug/kg	88.3	1					
Thallium	U	ND	14500	58000	ug/kg	88.3	10	TXT1	12/06/19	1716	1945551	4
Calcium		335000	23200	72500	ug/kg	88.3	1	TXT1	12/09/19	1206	1945551	5
Sodium		91100	21600	77000	ug/kg	93.8	1	LS	12/10/19	1411	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	28.2	6.24	43.7	ug/kg	95.1	2	PRB	12/11/19	1409	1945538	7
Uranium-238		2610	41.2	125	ug/kg	95.1	2					
Uranium-234	U	ND	6.24	31.2	ug/kg	95.1	2	PRB	12/11/19	1531	1945538	8
Nutrient Analysis												

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"
Sample ID: 498097002

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		692	13.4	37.3	mg/kg	45.5	5	KLP1	12/10/19	1054	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6"	Project: WNUC01519
Sample ID: 498097003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 56.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.48	0.823	2.42	mg/kg	10.4	1	LXA2	12/06/19	0454	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	57.1	31.9	95.9	ug/kg	103	1	CW2	12/06/19	1038	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		24300000	15600	45800	ug/kg	98.8	1	TXT1	12/06/19	1719	1945551	3
Antimony	U	ND	756	4580	ug/kg	98.8	1					
Arsenic	J	4400	1150	6870	ug/kg	98.8	1					
Barium		144000	229	1150	ug/kg	98.8	1					
Beryllium		1600	229	1150	ug/kg	98.8	1					
Cadmium	U	ND	229	1150	ug/kg	98.8	1					
Chromium		29700	344	2290	ug/kg	98.8	1					
Cobalt		7140	344	1150	ug/kg	98.8	1					
Copper		20000	687	4580	ug/kg	98.8	1					
Iron		17000000	18300	57300	ug/kg	98.8	1					
Lead		23900	756	4580	ug/kg	98.8	1					
Magnesium		2700000	19500	68700	ug/kg	98.8	1					
Manganese		156000	458	2290	ug/kg	98.8	1					
Nickel		11900	344	1150	ug/kg	98.8	1					
Potassium		1500000	14700	57300	ug/kg	98.8	1					
Selenium	U	ND	1150	6870	ug/kg	98.8	1					
Vanadium		71200	229	1150	ug/kg	98.8	1					
Zinc		51500	916	4580	ug/kg	98.8	1					
Silver	U	ND	2290	11500	ug/kg	98.8	10	TXT1	12/06/19	1722	1945551	4
Thallium	U	ND	11500	45800	ug/kg	98.8	10					
Calcium		452000	18300	57300	ug/kg	98.8	1	TXT1	12/09/19	1208	1945551	5
Sodium		71900	14800	52800	ug/kg	91.1	1	LS	12/10/19	1413	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	26.8	4.36	30.5	ug/kg	94.0	2	PRB	12/11/19	1410	1945538	7
Uranium-238		2530	28.8	87.2	ug/kg	94.0	2					
Uranium-234	U	ND	4.36	21.8	ug/kg	94.0	2	PRB	12/11/19	1533	1945538	8
Nutrient Analysis												

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6"
Sample ID: 498097003

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		465	9.66	26.8	mg/kg	46.3	5	KLP1	12/10/19	1055	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 57.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.69	0.825	2.43	mg/kg	10.2	1	LXA2	12/06/19	0525	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	58.5	33.8	102	ug/kg	107	1	CW2	12/06/19	1040	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		23900000	14500	42700	ug/kg	89.9	1	TXT1	12/06/19	1725	1945551	3
Antimony	U	ND	704	4270	ug/kg	89.9	1					
Arsenic	J	3090	1070	6400	ug/kg	89.9	1					
Barium		146000	213	1070	ug/kg	89.9	1					
Beryllium		1930	213	1070	ug/kg	89.9	1					
Cadmium	U	ND	213	1070	ug/kg	89.9	1					
Chromium		34600	320	2130	ug/kg	89.9	1					
Cobalt		10300	320	1070	ug/kg	89.9	1					
Copper		19600	640	4270	ug/kg	89.9	1					
Iron		18500000	17100	53300	ug/kg	89.9	1					
Lead		23400	704	4270	ug/kg	89.9	1					
Magnesium		3020000	18100	64000	ug/kg	89.9	1					
Manganese		186000	427	2130	ug/kg	89.9	1					
Nickel		11600	320	1070	ug/kg	89.9	1					
Potassium		850000	13700	53300	ug/kg	89.9	1					
Selenium	U	ND	1070	6400	ug/kg	89.9	1					
Vanadium		81000	213	1070	ug/kg	89.9	1					
Zinc		54700	854	4270	ug/kg	89.9	1					
Silver	U	ND	2130	10700	ug/kg	89.9	10	TXT1	12/06/19	1728	1945551	4
Thallium	U	ND	10700	42700	ug/kg	89.9	10					
Calcium		317000	17100	53300	ug/kg	89.9	1	TXT1	12/09/19	1211	1945551	5
Sodium		76600	15700	56000	ug/kg	94.3	1	LS	12/10/19	1415	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	29.5	4.65	32.6	ug/kg	98.0	2	PRB	12/11/19	1412	1945538	7
Uranium-238		2690	30.7	93.1	ug/kg	98.0	2					
Uranium-234	U	ND	4.65	23.3	ug/kg	98.0	2	PRB	12/11/19	1535	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		271	11.1	30.9	mg/kg	52.1	5	KLP1	12/10/19	1056	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"	Project: WNUC01519
Sample ID: 498097005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.838	0.646	1.90	mg/kg	10.0	1	LXA2	12/06/19	0556	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	82.5	29.5	88.7	ug/kg	117	1	CW2	12/06/19	1041	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		23100000	11800	34600	ug/kg	91.1	1	TXT1	12/06/19	1737	1945551	3
Antimony	U	ND	571	3460	ug/kg	91.1	1					
Arsenic	J	3440	865	5190	ug/kg	91.1	1					
Barium		146000	173	865	ug/kg	91.1	1					
Beryllium		1770	173	865	ug/kg	91.1	1					
Cadmium	U	ND	173	865	ug/kg	91.1	1					
Chromium		30200	260	1730	ug/kg	91.1	1					
Cobalt		8500	260	865	ug/kg	91.1	1					
Copper		23500	519	3460	ug/kg	91.1	1					
Iron		15400000	13800	43300	ug/kg	91.1	1					
Lead		26900	571	3460	ug/kg	91.1	1					
Magnesium		27600000	14700	51900	ug/kg	91.1	1					
Manganese		258000	346	1730	ug/kg	91.1	1					
Nickel		11600	260	865	ug/kg	91.1	1					
Potassium		13500000	11100	43300	ug/kg	91.1	1					
Selenium	J	1260	865	5190	ug/kg	91.1	1					
Thallium	U	ND	865	3460	ug/kg	91.1	1					
Vanadium		71000	173	865	ug/kg	91.1	1					
Zinc		52700	692	3460	ug/kg	91.1	1					
Silver	U	ND	1730	8650	ug/kg	91.1	10	TXT1	12/06/19	1740	1945551	4
Calcium		523000	13800	43300	ug/kg	91.1	1	TXT1	12/09/19	1214	1945551	5
Sodium		53800	12800	45800	ug/kg	96.3	1	LS	12/10/19	1418	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		29.2	3.45	24.2	ug/kg	90.9	2	PRB	12/11/19	1417	1945538	7
Uranium-238		3200	22.8	69.1	ug/kg	90.9	2					
Uranium-234	U	ND	3.45	17.3	ug/kg	90.9	2	PRB	12/11/19	1541	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"
Sample ID: 498097005

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		387	8.06	22.4	mg/kg	47.2	5	KLP1	12/10/19	1056	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"	Project: WNUC01519
Sample ID: 498097006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 36.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.607	0.510	1.50	mg/kg	9.55	1	LXA2	12/06/19	0626	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	48.3	22.1	66.4	ug/kg	106	1	CW2	12/06/19	1043	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		24100000	10600	31300	ug/kg	99.6	1	TXT1	12/06/19	1743	1945551	3
Arsenic	J	3750	782	4690	ug/kg	99.6	1					
Barium		151000	156	782	ug/kg	99.6	1					
Beryllium		2520	156	782	ug/kg	99.6	1					
Cadmium	U	ND	156	782	ug/kg	99.6	1					
Chromium		32500	235	1560	ug/kg	99.6	1					
Cobalt		13700	235	782	ug/kg	99.6	1					
Copper		21800	469	3130	ug/kg	99.6	1					
Iron		25200000	12500	39100	ug/kg	99.6	1					
Lead		16900	516	3130	ug/kg	99.6	1					
Magnesium		3810000	13300	46900	ug/kg	99.6	1					
Manganese		281000	313	1560	ug/kg	99.6	1					
Nickel		13200	235	782	ug/kg	99.6	1					
Potassium		1150000	10000	39100	ug/kg	99.6	1					
Selenium	J	1200	782	4690	ug/kg	99.6	1					
Vanadium		87600	156	782	ug/kg	99.6	1					
Zinc		63900	626	3130	ug/kg	99.6	1					
Antimony	U	ND	5160	31300	ug/kg	99.6	10	TXT1	12/06/19	1746	1945551	4
Silver	U	ND	1560	7820	ug/kg	99.6	10					
Thallium	U	ND	7820	31300	ug/kg	99.6	10					
Calcium		337000	12500	39100	ug/kg	99.6	1	TXT1	12/09/19	1217	1945551	5
Sodium		52900	10400	37000	ug/kg	94.2	1	LS	12/10/19	1420	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		24.7	2.82	19.7	ug/kg	89.6	2	PRB	12/11/19	1419	1945538	7
Uranium-238		3290	18.6	56.3	ug/kg	89.6	2					
Uranium-234	U	ND	2.82	14.1	ug/kg	89.6	2	PRB	12/11/19	1543	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"
Sample ID: 498097006

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		196	5.20	14.4	mg/kg	36.8	5	KLP1	12/10/19	1057	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719	Project: WNUC01519
Sample ID: 498097007	Client ID: WNUC009
Matrix: Water	
Collect Date: 27-NOV-19 12:30	
Receive Date: 04-DEC-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	CH5	12/05/19	0114	1945533	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1046	1945742	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	12/06/19	1643	1945555	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1357	1945540	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1517	1945540	5
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719
Sample ID: 498097007

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	J	0.0217	0.017	0.050	mg/L	1.00	1	KLP1	12/10/19	1005	1945071	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/10/19	0809	1945070
SW846 3005A	SW846 3005A for 6010D	HH1	12/05/19	1615	1945554
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12"	Project: WNUC01519
Sample ID: 498097008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:30	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 40.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.690	0.537	1.58	mg/kg	9.46	1	LXA2	12/06/19	0657	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	41.0	23.7	71.3	ug/kg	107	1	CW2	12/06/19	1045	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27300000	11100	32600	ug/kg	97.7	1	TXT1	12/06/19	1749	1945551	3
Antimony	U	ND	538	3260	ug/kg	97.7	1					
Arsenic		5260	815	4890	ug/kg	97.7	1					
Barium		190000	163	815	ug/kg	97.7	1					
Beryllium		4250	163	815	ug/kg	97.7	1					
Cadmium	U	ND	163	815	ug/kg	97.7	1					
Chromium		33000	245	1630	ug/kg	97.7	1					
Cobalt		13400	245	815	ug/kg	97.7	1					
Copper		28600	489	3260	ug/kg	97.7	1					
Iron		21400000	13000	40800	ug/kg	97.7	1					
Lead		18500	538	3260	ug/kg	97.7	1					
Magnesium		39600000	13900	48900	ug/kg	97.7	1					
Manganese		250000	326	1630	ug/kg	97.7	1					
Nickel		17500	245	815	ug/kg	97.7	1					
Potassium		11500000	10400	40800	ug/kg	97.7	1					
Selenium	U	ND	815	4890	ug/kg	97.7	1					
Thallium	U	ND	815	3260	ug/kg	97.7	1					
Vanadium		79800	163	815	ug/kg	97.7	1					
Zinc		83500	652	3260	ug/kg	97.7	1					
Silver	U	ND	1630	8150	ug/kg	97.7	10	TXT1	12/06/19	1752	1945551	4
Calcium		202000	13000	40800	ug/kg	97.7	1	TXT1	12/09/19	1220	1945551	5
Sodium		69800	11000	39400	ug/kg	94.5	1	LS	12/10/19	1427	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	21.7	3.27	22.9	ug/kg	98.0	2	PRB	12/11/19	1420	1945538	7
Uranium-238		2970	21.6	65.5	ug/kg	98.0	2					
Uranium-234	U	ND	3.27	16.4	ug/kg	98.0	2	PRB	12/11/19	1545	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12"
Sample ID: 498097008

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		244	5.61	15.6	mg/kg	37.3	5	KLP1	12/10/19	1102	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"	Project: WNUC01519
Sample ID: 498097009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 75.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.93	1.42	4.16	mg/kg	10.2	1	LXA2	12/06/19	0728	1945544	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	104	64.7	195	ug/kg	120	1	CW2	12/06/19	1050	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27300000	25300	74400	ug/kg	91.4	1	TXT1	12/06/19	1755	1945551	3
Antimony	U	ND	1230	7440	ug/kg	91.4	1					
Arsenic	J	6540	1860	11200	ug/kg	91.4	1					
Barium		144000	372	1860	ug/kg	91.4	1					
Beryllium	J	1610	372	1860	ug/kg	91.4	1					
Cadmium	U	ND	372	1860	ug/kg	91.4	1					
Chromium		34500	558	3720	ug/kg	91.4	1					
Cobalt		6780	558	1860	ug/kg	91.4	1					
Copper		25600	1120	7440	ug/kg	91.4	1					
Iron		18100000	29800	93000	ug/kg	91.4	1					
Lead		29800	1230	7440	ug/kg	91.4	1					
Magnesium		2390000	31600	112000	ug/kg	91.4	1					
Manganese		127000	744	3720	ug/kg	91.4	1					
Nickel		12100	558	1860	ug/kg	91.4	1					
Potassium		1310000	23800	93000	ug/kg	91.4	1					
Selenium	U	ND	1860	11200	ug/kg	91.4	1					
Vanadium		77100	372	1860	ug/kg	91.4	1					
Zinc		54100	1490	7440	ug/kg	91.4	1					
Silver	U	ND	3720	18600	ug/kg	91.4	10	TXT1	12/06/19	1758	1945551	4
Thallium	U	ND	18600	74400	ug/kg	91.4	10					
Calcium		348000	29800	93000	ug/kg	91.4	1	TXT1	12/09/19	1223	1945551	5
Sodium	J	88000	26100	93300	ug/kg	91.7	1	LS	12/10/19	1429	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	22.6	7.42	52.0	ug/kg	91.2	2	PRB	12/11/19	1422	1945538	7
Uranium-238		2870	49.0	148	ug/kg	91.2	2					
Uranium-234	U	ND	7.42	37.1	ug/kg	91.2	2	PRB	12/11/19	1547	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"
Sample ID: 498097009

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		854	15.5	43.1	mg/kg	42.4	5	KLP1	12/10/19	1103	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 6"-12"	Project: WNUC01519
Sample ID: 498097010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:10	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 64.7%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.01	0.961	2.83	mg/kg	9.98	1	JLD1	12/07/19	0153	1945958	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	65.2	44.7	134	ug/kg	119	1	CW2	12/06/19	1051	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		26800000	18000	53000	ug/kg	93.5	1	TXT1	12/06/19	1800	1945551	3
Antimony	U	ND	874	5300	ug/kg	93.5	1					
Arsenic	J	4470	1320	7940	ug/kg	93.5	1					
Barium		124000	265	1320	ug/kg	93.5	1					
Beryllium		1640	265	1320	ug/kg	93.5	1					
Cadmium	U	ND	265	1320	ug/kg	93.5	1					
Chromium		33400	397	2650	ug/kg	93.5	1					
Cobalt		7100	397	1320	ug/kg	93.5	1					
Copper		21100	794	5300	ug/kg	93.5	1					
Iron		15800000	21200	66200	ug/kg	93.5	1					
Lead		25900	874	5300	ug/kg	93.5	1					
Magnesium		2700000	22500	79400	ug/kg	93.5	1					
Manganese		114000	530	2650	ug/kg	93.5	1					
Nickel		12600	397	1320	ug/kg	93.5	1					
Potassium		1410000	16900	66200	ug/kg	93.5	1					
Selenium	J	1340	1320	7940	ug/kg	93.5	1					
Vanadium		78900	265	1320	ug/kg	93.5	1					
Zinc		53400	1060	5300	ug/kg	93.5	1					
Silver	U	ND	2650	13200	ug/kg	93.5	10	TXT1	12/06/19	1803	1945551	4
Thallium	U	ND	13200	53000	ug/kg	93.5	10					
Calcium		187000	21200	66200	ug/kg	93.5	1	TXT1	12/09/19	1233	1945551	5
Sodium		70600	17800	63500	ug/kg	89.6	1	LS	12/10/19	1431	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	26.0	5.07	35.5	ug/kg	89.4	2	PRB	12/11/19	1424	1945538	7
Uranium-238		2990	33.5	101	ug/kg	89.4	2					
Uranium-234	U	ND	5.07	25.3	ug/kg	89.4	2	PRB	12/11/19	1549	1945538	8
Nutrient Analysis												

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Certificate of Analysis

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 6"-12"
Sample ID: 498097010

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		536	9.81	27.2	mg/kg	38.5	5	KLP1	12/10/19	1104	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-55 0"-6"	Project:	WNUC01519
Sample ID:	498097011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-19 11:15		
Receive Date:	04-DEC-19		
Collector:	Client		
Moisture:	48.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.640	1.88	mg/kg	9.73	1	JLD1	12/09/19	2320	1946463	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	76.6	28.5	85.6	ug/kg	111	1	CW2	12/06/19	1053	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		29400000	12400	36600	ug/kg	94.5	1	TXT1	12/06/19	1837	1945551	3
Antimony	U	ND	603	3660	ug/kg	94.5	1					
Arsenic	J	4600	914	5480	ug/kg	94.5	1					
Barium		153000	183	914	ug/kg	94.5	1					
Beryllium		1880	183	914	ug/kg	94.5	1					
Cadmium	U	ND	183	914	ug/kg	94.5	1					
Chromium		36400	274	1830	ug/kg	94.5	1					
Cobalt		8470	274	914	ug/kg	94.5	1					
Copper		24300	548	3660	ug/kg	94.5	1					
Iron		19100000	14600	45700	ug/kg	94.5	1					
Lead		33900	603	3660	ug/kg	94.5	1					
Magnesium		2920000	15500	54800	ug/kg	94.5	1					
Manganese		175000	366	1830	ug/kg	94.5	1					
Nickel		13500	274	914	ug/kg	94.5	1					
Potassium		1370000	11700	45700	ug/kg	94.5	1					
Selenium	U	ND	914	5480	ug/kg	94.5	1					
Vanadium		93200	183	914	ug/kg	94.5	1					
Zinc		56100	731	3660	ug/kg	94.5	1					
Silver	U	ND	1830	9140	ug/kg	94.5	10	TXT1	12/06/19	1847	1945551	4
Thallium	U	ND	9140	36600	ug/kg	94.5	10					
Calcium		191000	14600	45700	ug/kg	94.5	1	TXT1	12/09/19	1245	1945551	5
Sodium		84100	13400	47900	ug/kg	99.0	1	LS	12/10/19	1353	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	25.4	3.67	25.7	ug/kg	94.9	2	PRB	12/11/19	1429	1945538	7
Uranium-238		3450	24.2	73.4	ug/kg	94.9	2					
Uranium-234	U	ND	3.67	18.3	ug/kg	94.9	2	PRB	12/11/19	1555	1945538	8
Nutrient Analysis												

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-55 0"-6"
Sample ID: 498097011

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		321	9.46	26.3	mg/kg	54.3	5	KLP1	12/10/19	1105	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/09/19	1742	1946461

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-55 6"-12"	Project:	WNUC01519
Sample ID:	498097012	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-19 11:20		
Receive Date:	04-DEC-19		
Collector:	Client		
Moisture:	41%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.597	1.76	mg/kg	10.4	1	JLD1	12/07/19	0255	1945958	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	54.2	24.9	74.7	ug/kg	110	1	CW2	12/06/19	1102	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		29300000	10300	30400	ug/kg	89.6	1	TXT1	12/06/19	1813	1945551	3
Antimony	U	ND	501	3040	ug/kg	89.6	1					
Arsenic		4560	759	4550	ug/kg	89.6	1					
Barium		159000	152	759	ug/kg	89.6	1					
Beryllium		3390	152	759	ug/kg	89.6	1					
Cadmium	U	ND	152	759	ug/kg	89.6	1					
Chromium		35900	228	1520	ug/kg	89.6	1					
Cobalt		15600	228	759	ug/kg	89.6	1					
Copper		26800	455	3040	ug/kg	89.6	1					
Iron		21900000	12100	38000	ug/kg	89.6	1					
Lead		17000	501	3040	ug/kg	89.6	1					
Magnesium		3650000	12900	45500	ug/kg	89.6	1					
Manganese		264000	304	1520	ug/kg	89.6	1					
Nickel		15500	228	759	ug/kg	89.6	1					
Potassium		834000	9720	38000	ug/kg	89.6	1					
Selenium	J	1240	759	4550	ug/kg	89.6	1					
Vanadium		86200	152	759	ug/kg	89.6	1					
Zinc		70800	607	3040	ug/kg	89.6	1					
Silver	U	ND	1520	7590	ug/kg	89.6	10	TXT1	12/06/19	1816	1945551	4
Thallium	U	ND	7590	30400	ug/kg	89.6	10					
Calcium		190000	12100	38000	ug/kg	89.6	1	TXT1	12/09/19	1236	1945551	5
Sodium		87000	11800	42100	ug/kg	99.4	1	LS	12/10/19	1434	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235		23.2	3.19	22.3	ug/kg	94.2	2	PRB	12/11/19	1438	1945538	7
Uranium-238		3230	21.1	63.8	ug/kg	94.2	2					
Uranium-234	U	ND	3.19	16.0	ug/kg	94.2	2	PRB	12/11/19	1605	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-55 6"-12"
Sample ID: 498097012

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		223	6.15	17.1	mg/kg	40.3	5	KLP1	12/10/19	1107	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6"	Project: WNUC01519
Sample ID: 498097013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.642	1.89	mg/kg	9.93	1	JLD1	12/07/19	0326	1945958	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	J	74.6	29.5	88.8	ug/kg	117	1	CW2	12/06/19	1103	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27000000	12200	36000	ug/kg	94.5	1	TXT1	12/06/19	1819	1945551	3
Antimony	U	ND	593	3600	ug/kg	94.5	1					
Arsenic	J	4540	899	5390	ug/kg	94.5	1					
Barium		166000	180	899	ug/kg	94.5	1					
Beryllium		2210	180	899	ug/kg	94.5	1					
Cadmium	U	ND	180	899	ug/kg	94.5	1					
Chromium		33400	270	1800	ug/kg	94.5	1					
Cobalt		8860	270	899	ug/kg	94.5	1					
Copper		25400	539	3600	ug/kg	94.5	1					
Iron		17100000	14400	44900	ug/kg	94.5	1					
Lead		31500	593	3600	ug/kg	94.5	1					
Magnesium		2740000	15300	53900	ug/kg	94.5	1					
Manganese		173000	360	1800	ug/kg	94.5	1					
Nickel		13500	270	899	ug/kg	94.5	1					
Potassium		1170000	11500	44900	ug/kg	94.5	1					
Selenium	J	1300	899	5390	ug/kg	94.5	1					
Vanadium		81800	180	899	ug/kg	94.5	1					
Zinc		55600	719	3600	ug/kg	94.5	1					
Silver	U	ND	1800	8990	ug/kg	94.5	10	TXT1	12/06/19	1822	1945551	4
Thallium	U	ND	8990	36000	ug/kg	94.5	10					
Calcium		289000	14400	44900	ug/kg	94.5	1	TXT1	12/09/19	1239	1945551	5
Sodium		63200	11800	42200	ug/kg	88.7	1	LS	12/10/19	1436	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	23.0	3.44	24.1	ug/kg	90.4	2	PRB	12/11/19	1439	1945538	7
Uranium-238		3100	22.7	68.8	ug/kg	90.4	2					
Uranium-234	U	ND	3.44	17.2	ug/kg	90.4	2	PRB	12/11/19	1607	1945538	8
Nutrient Analysis												

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Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6"
Sample ID: 498097013

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		449	5.28	14.7	mg/kg	30.9	5	KLP1	12/10/19	1108	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"	Project: WNUC01519
Sample ID: 498097014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.666	1.96	mg/kg	10.2	1	JLD1	12/07/19	0357	1945958	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury		83.7	27.8	83.7	ug/kg	109	1	CW2	12/06/19	1105	1945748	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		27200000	11800	34700	ug/kg	90.1	1	TXT1	12/06/19	1825	1945551	3
Antimony	U	ND	572	3470	ug/kg	90.1	1					
Arsenic	J	4870	867	5200	ug/kg	90.1	1					
Barium		170000	173	867	ug/kg	90.1	1					
Beryllium		2280	173	867	ug/kg	90.1	1					
Cadmium	U	ND	173	867	ug/kg	90.1	1					
Chromium		34100	260	1730	ug/kg	90.1	1					
Cobalt		9360	260	867	ug/kg	90.1	1					
Copper		26400	520	3470	ug/kg	90.1	1					
Iron		18700000	13900	43400	ug/kg	90.1	1					
Lead		30000	572	3470	ug/kg	90.1	1					
Magnesium		3040000	14700	52000	ug/kg	90.1	1					
Manganese		194000	347	1730	ug/kg	90.1	1					
Nickel		13900	260	867	ug/kg	90.1	1					
Potassium		1280000	11100	43400	ug/kg	90.1	1					
Selenium	U	ND	867	5200	ug/kg	90.1	1					
Vanadium		86900	173	867	ug/kg	90.1	1					
Zinc		59100	694	3470	ug/kg	90.1	1					
Silver	U	ND	1730	8670	ug/kg	90.1	10	TXT1	12/06/19	1828	1945551	4
Thallium	U	ND	8670	34700	ug/kg	90.1	10					
Calcium		297000	13900	43400	ug/kg	90.1	1	TXT1	12/09/19	1242	1945551	5
Sodium		71300	12800	45700	ug/kg	94.9	1	LS	12/10/19	1438	1947080	6
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-235	J	24.5	3.77	26.4	ug/kg	97.8	2	PRB	12/11/19	1441	1945538	7
Uranium-238		3440	24.9	75.4	ug/kg	97.8	2					
Uranium-234	U	ND	3.77	18.8	ug/kg	97.8	2	PRB	12/11/19	1609	1945538	8
Nutrient Analysis												

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"
Sample ID: 498097014

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		325	6.28	17.4	mg/kg	36.2	5	KLP1	12/10/19	1109	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219	Project: WNUC01519
Sample ID: 498097015	Client ID: WNUC009
Matrix: Water	
Collect Date: 02-DEC-19 12:35	
Receive Date: 04-DEC-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	CH5	12/05/19	0143	1945533	1
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1048	1945742	2
Metals Analysis-ICP												
SW846 3005A/6010D Metals Scan Liquid "As Received"												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	12/06/19	1650	1945555	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
Metals Analysis-ICP-MS												
SW846 3010A/6020B "As Received"												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1358	1945540	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1519	1945540	5
Nutrient Analysis												

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Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219
Sample ID: 498097015

Project: WNUC01519
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	U	ND	0.017	0.050	mg/L	1.00	1	KLP1	12/10/19	1006	1945071	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/10/19	0809	1945070
SW846 3005A	SW846 3005A for 6010D	HH1	12/05/19	1615	1945554
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

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: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID:	SED-51 6"-12"	Project:	WNUC01519
Sample ID:	498097001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	27-NOV-19 10:05		
Receive Date:	04-DEC-19		
Collector:	Client		
Moisture:	66%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.27	+/-0.406	0.216	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0695	+/-0.137	0.189	0.500	pCi/g							
Uranium-238		1.15	+/-0.381	0.0958	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	4.89	+/-13.0	22.3	50.0	pCi/g			JJ3	12/10/19	0523	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			86.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"	Project: WNUC01519
Sample ID: 498097002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 69.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.10	+/-0.503	0.219	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.178	+/-0.181	0.179	0.500	pCi/g							
Uranium-238		1.42	+/-0.416	0.199	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-4.87	+/-18.3	32.1	50.0	pCi/g			JJ3	12/10/19	0545	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			99.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6" Project: WNUC01519
Sample ID: 498097003 Client ID: WNUC009
Matrix: Solid
Collect Date: 27-NOV-19 11:00
Receive Date: 04-DEC-19
Collector: Client
Moisture: 56.9%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.77	+/-0.609	0.417	0.500	pCi/g			MXS2	12/07/19	0901	1945413	1
Uranium-235/236	U	0.308	+/-0.324	0.403	0.500	pCi/g							
Uranium-238		1.72	+/-0.583	0.237	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-14.5	+/-16.6	29.7	50.0	pCi/g			JJ3	12/10/19	0607	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			70.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 57.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.88	+/-0.491	0.273	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0494	+/-0.136	0.236	0.500	pCi/g							
Uranium-238		1.45	+/-0.430	0.231	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-15.7	+/-22.2	39.5	50.0	pCi/g			JJ3	12/10/19	0629	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			89.6	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"	Project: WNUC01519
Sample ID: 498097005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		2.15	+/-0.463	0.202	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.194	+/-0.174	0.189	0.500	pCi/g							
Uranium-238		1.45	+/-0.381	0.165	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-8.9	+/-21.3	37.5	50.0	pCi/g			JJ3	12/10/19	0651	1945561	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			95.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"	Project: WNUC01519
Sample ID: 498097006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 36.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.06	+/-0.814	0.570	0.500	pCi/g			MXS2	12/10/19	1231	1945413	1
Uranium-235/236	U	0.0708	+/-0.266	0.447	0.500	pCi/g							
Uranium-238		2.34	+/-0.852	0.497	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-9.38	+/-22.8	40.2	50.0	pCi/g			JJ3	12/10/19	0713	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			44.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.8	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719 Project: WNUC01519
Sample ID: 498097007 Client ID: WNUC009
Matrix: Water
Collect Date: 27-NOV-19 12:30
Receive Date: 04-DEC-19
Collector: Client

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MXS2	12/05/19	1215 1945391	1
Uranium-233/234	U	0.139	+/-0.186	0.268	0.500	pCi/L						
Uranium-235/236	U	0.214	+/-0.230	0.262	0.500	pCi/L						
Uranium-238	U	0.0888	+/-0.175	0.297	0.500	pCi/L						

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	18.0	+/-23.6	39.9	50.0	pCi/L		JJ3		12/10/19	0410 1945548	2
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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, Liquid "As Received"			70.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12" Project: WNUC01519
Sample ID: 498097008 Client ID: WNUC009
Matrix: Solid
Collect Date: 02-DEC-19 11:30
Receive Date: 04-DEC-19
Collector: Client
Moisture: 40.1%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.89	+/-0.476	0.261	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0276	+/-0.103	0.174	0.500	pCi/g							
Uranium-238		1.72	+/-0.447	0.163	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-5.52	+/-21.0	36.7	50.0	pCi/g			JJ3	12/10/19	0734	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			92.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.9	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"	Project: WNUC01519
Sample ID: 498097009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 75.4%	

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		1.78	+/-0.441	0.200	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.119	+/-0.150	0.186	0.500	pCi/g							
Uranium-238		1.36	+/-0.386	0.179	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	1.51	+/-21.4	37.1	50.0	pCi/g			JJ3	12/10/19	0756	1945561	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			92.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-54 6"-12"	Project: WNUC01519
Sample ID: 498097010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:10	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 64.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.48	+/-0.459	0.233	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.120	+/-0.173	0.209	0.500	pCi/g							
Uranium-238		1.87	+/-0.514	0.232	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-8.79	+/-14.3	25.3	50.0	pCi/g			JJ3	12/10/19	0818	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			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	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-55 0"-6"	Project: WNUC01519
Sample ID: 498097011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:15	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.05	+/-0.511	0.257	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	-0.0281	+/-0.0848	0.238	0.500	pCi/g							
Uranium-238		1.74	+/-0.468	0.193	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	6.19	+/-23.5	40.4	50.0	pCi/g			JJ3	12/10/19	0840	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			89.3	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-55 6"-12" Project: WNUC01519
Sample ID: 498097012 Client ID: WNUC009
Matrix: Solid
Collect Date: 02-DEC-19 11:20
Receive Date: 04-DEC-19
Collector: Client
Moisture: 41%

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		1.62	+/-0.452	0.211	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.155	+/-0.171	0.116	0.500	pCi/g							
Uranium-238		1.62	+/-0.449	0.174	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-2.27	+/-21.2	36.9	50.0	pCi/g			JJ3	12/10/19	0902	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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"			81.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.5	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6" Project: WNUC01519
Sample ID: 498097013 Client ID: WNUC009
Matrix: Solid
Collect Date: 02-DEC-19 11:25
Receive Date: 04-DEC-19
Collector: Client
Moisture: 47.4%

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

Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		2.02	+/-0.485	0.230	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.214	+/-0.186	0.107	0.500	pCi/g							
Uranium-238		1.40	+/-0.402	0.160	0.500	pCi/g							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	2.53	+/-18.3	31.5	50.0	pCi/g			JJ3	12/10/19	0924	1945561	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"	Project: WNUC01519
Sample ID: 498097014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		2.82	+/-0.722	0.312	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.115	+/-0.196	0.172	0.500	pCi/g							
Uranium-238		2.11	+/-0.624	0.257	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-11.8	+/-17.2	30.6	50.0	pCi/g			JJ3	12/10/19	0946	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

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	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.1	(15%-125%)

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: December 11, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219	Project: WNUC01519
Sample ID: 498097015	Client ID: WNUC009
Matrix: Water	
Collect Date: 02-DEC-19 12:35	
Receive Date: 04-DEC-19	
Collector: Client	

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

Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MXS2	12/05/19	1215	1945391	1
Uranium-233/234	U	0.0037	+/-0.168	0.371	0.500	pCi/L							
Uranium-235/236	U	0.146	+/-0.232	0.321	0.500	pCi/L							
Uranium-238	U	0.0601	+/-0.165	0.287	0.500	pCi/L							

Rad Liquid Scintillation Analysis

Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	19.5	+/-23.9	40.3	50.0	pCi/L		JJ3	12/10/19	0432	1945548	2
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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, Liquid "As Received"			57.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "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	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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QC Summary

Report Date: December 11, 2019

Page 1 of 20

Westinghouse Electric Company, LLC

PO Drawer R
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 498097

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1945533										
QC1204447637	498037002	DUP									
Fluoride		0.304		0.301	mg/L	0.991 ^		(+/-0.100)	CH5	12/04/19	22:44
QC1204447634	LCS										
Fluoride	2.50			2.41	mg/L		96.3	(90%-110%)		12/04/19	21:45
QC1204447633	MB										
Fluoride			U	ND	mg/L					12/04/19	21:15
QC1204447638	498037002	PS									
Fluoride	2.50	0.304		2.53	mg/L		89.2*	(90%-110%)		12/04/19	23:14
Batch	1945544										
QC1204447649	498097001	DUP									
Fluoride		2.96	J	2.94	mg/kg	0.692 ^		(+/-2.96)	LXA2	12/06/19	02:20
QC1204447648	LCS										
Fluoride	25.0			27.3	mg/kg		109	(90%-110%)		12/06/19	01:18
QC1204447647	MB										
Fluoride			U	ND	mg/kg					12/06/19	00:47
QC1204447650	498097001	MS									
Fluoride	75.2	2.96		17.7	mg/kg		19.5*	(75%-125%)		12/06/19	02:50
Batch	1945958										
QC1204448644	498097010	DUP									
Fluoride			J	1.01	U	ND	mg/kg	200 ^		JLD1	12/07/19 06:31
QC1204448643	LCS										
Fluoride	24.8			25.5	mg/kg		103	(90%-110%)		12/07/19	06:00

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QC Summary

Workorder: 498097

Page 2 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1945958										
QC1204448642		MB									
Fluoride			U	ND	mg/kg				JLD1	12/07/19	05:29
QC1204448645	498097010	MS									
Fluoride	70.8	J	1.01	15.6	mg/kg		20.6*	(75%-125%)		12/07/19	07:02
Batch	1946463										
QC1204451547	498097011	DUP									
Fluoride			U	ND	U	ND	mg/kg	N/A		JLD1	12/09/19 23:51
QC1204449643		LCS									
Fluoride	24.8			24.8	mg/kg		100	(90%-110%)		12/09/19	22:49
QC1204449642		MB									
Fluoride			U	ND	mg/kg					12/09/19	22:18
QC1204451548	498097011	MS									
Fluoride	47.1	U	ND	12.8	mg/kg		26*	(75%-125%)		12/10/19	00:22
Metals Analysis - ICPMS											
Batch	1945538										
QC1204447625		LCS									
Uranium-235	36.0			34.4	ug/kg		95.5	(80%-120%)	PRB	12/11/19	14:05
Uranium-238	4960			4930	ug/kg		99.4	(80%-120%)			
QC1204447653		LCS									
Uranium-234	54.5			58.2	ug/kg		107	(80%-120%)		12/11/19	15:27
QC1204447624		MB									
Uranium-234			U	ND	ug/kg					12/11/19	15:25
Uranium-235			U	ND	ug/kg					12/11/19	14:03

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QC Summary

Workorder: 498097

Page 3 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1945538										
Uranium-238			U	ND	ug/kg				PRB	12/11/19	14:03
QC1204447626	498097011	MS									
Uranium-235	69.5	J	25.4	109	ug/kg		121	(75%-125%)		12/11/19	14:31
Uranium-238	9580		3450	15000	ug/kg		121	(75%-125%)			
QC1204447654	498097011	MS									
Uranium-234	104	U	ND	130	ug/kg		124	(75%-125%)		12/11/19	15:57
QC1204447627	498097011	MSD									
Uranium-235	63.5	J	25.4	100	ug/kg	8.78	118	(0%-20%)		12/11/19	14:32
Uranium-238	8760		3450	13600	ug/kg	9.96	116	(0%-20%)			
QC1204447655	498097011	MSD									
Uranium-234	104	U	ND	127	ug/kg	2.66	121	(0%-20%)		12/11/19	15:59
QC1204447628	498097011	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/11/19	16:03
Uranium-235		J	0.0691	J	0.0127	ug/L	8.1	(0%-20%)		12/11/19	14:36
Uranium-238			9.39		1.58	ug/L	15.8	(0%-20%)			
Batch	1945540										
QC1204447630	LCS										
Uranium-235	0.360			0.370	ug/L		103	(80%-120%)	PRB	12/11/19	13:50
Uranium-238	49.6			50.9	ug/L		103	(80%-120%)			
QC1204447651	LCS										
Uranium-234	0.550			0.611	ug/L		111	(80%-120%)		12/11/19	15:09

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QC Summary

Workorder: 498097

Page 4 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch 1945540											
QC1204447631		LCSD									
Uranium-235	0.360			0.386	ug/L	4.02	107	(0%-20%)	PRB	12/11/19	13:52
Uranium-238	49.6			52.8	ug/L	3.63	106	(0%-20%)			
QC1204447652		LCSD									
Uranium-234	0.550			0.587	ug/L	4.01	107	(0%-20%)		12/11/19	15:11
QC1204447629		MB									
Uranium-234			U	ND	ug/L					12/11/19	15:07
Uranium-235			U	ND	ug/L					12/11/19	13:48
Uranium-238			U	ND	ug/L						
QC1204447632		497772015	SDILT								
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	15:15
Uranium-235	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	13:55
Uranium-238	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-ICP											
Batch 1945551											
QC1204447664		LCS									
Aluminum	494000			476000	ug/kg		96.3	(80%-120%)	TXT1	12/06/19	17:05
Antimony	49400			46600	ug/kg		94.4	(80%-120%)			
Arsenic	49400			45300	ug/kg		91.7	(80%-120%)			
Barium	49400			47400	ug/kg		96	(80%-120%)			

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QC Summary

Workorder: 498097

Page 5 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Beryllium	49400			49100	ug/kg		99.3	(80%-120%)	TXT1	12/06/19	17:05
Cadmium	49400			47000	ug/kg		95.1	(80%-120%)			
Calcium	494000			512000	ug/kg		104	(80%-120%)		12/09/19	12:00
Chromium	49400			47100	ug/kg		95.3	(80%-120%)		12/06/19	17:05
Cobalt	49400			47500	ug/kg		96.1	(80%-120%)			
Copper	49400			48800	ug/kg		98.9	(80%-120%)			
Iron	494000			476000	ug/kg		96.4	(80%-120%)			
Lead	49400			46300	ug/kg		93.8	(80%-120%)			
Magnesium	494000			482000	ug/kg		97.6	(80%-120%)			
Manganese	49400			47200	ug/kg		95.6	(80%-120%)			
Nickel	49400			47300	ug/kg		95.8	(80%-120%)			
Potassium	494000			481000	ug/kg		97.3	(80%-120%)			
Selenium	49400			45000	ug/kg		91	(80%-120%)			
Silver	9880			9380	ug/kg		94.9	(80%-120%)			
Thallium	49400			46600	ug/kg		94.2	(80%-120%)			

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QC Summary

Workorder: 498097

Page 6 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Vanadium	49400			47900	ug/kg		96.9	(80%-120%)	TXT1	12/06/19	17:05
Zinc	49400			46200	ug/kg		93.6	(80%-120%)			
QC1204447663	MB										
Aluminum			U	ND	ug/kg					12/06/19	17:01
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg					12/09/19	11:56
Chromium			U	ND	ug/kg					12/06/19	17:01
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						

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QC Summary

Workorder: 498097

Page 7 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Manganese			U	ND	ug/kg				TXT1	12/06/19	17:01
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204447665 498097011 MS											
Aluminum	963000	29400000		38100000	ug/kg		N/A	(75%-125%)		12/06/19	18:40
Antimony	96300	U	ND	80600	ug/kg		83.7	(75%-125%)			
Arsenic	96300	J	4600	83600	ug/kg		82.1	(75%-125%)			
Barium	96300		153000	246000	ug/kg		96.3	(75%-125%)			
Beryllium	96300		1880	90700	ug/kg		92.2	(75%-125%)			
Cadmium	96300	U	ND	83700	ug/kg		86.9	(75%-125%)			
Calcium	963000		191000	1100000	ug/kg		94.3	(75%-125%)		12/09/19	12:48

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QC Summary

Workorder: 498097

Page 8 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Chromium	96300	36400		123000	ug/kg		89.7	(75%-125%)	TXT1	12/06/19	18:40
Cobalt	96300	8470		95000	ug/kg		89.9	(75%-125%)			
Copper	96300	24300		119000	ug/kg		98.5	(75%-125%)			
Iron	963000	19100000		20500000	ug/kg		N/A	(75%-125%)			
Lead	96300	33900		121000	ug/kg		90.1	(75%-125%)			
Magnesium	963000	2920000		3940000	ug/kg		106	(75%-125%)			
Manganese	96300	175000		269000	ug/kg		97.5	(75%-125%)			
Nickel	96300	13500		101000	ug/kg		90.6	(75%-125%)			
Potassium	963000	1370000		2310000	ug/kg		97.1	(75%-125%)			
Selenium	96300	U	ND	79900	ug/kg		82.5	(75%-125%)			
Silver	19300	U	ND	14800	ug/kg		76.6	(75%-125%)		12/06/19	18:50
Thallium	96300	U	ND	82400	ug/kg		85.6	(75%-125%)			
Vanadium	96300	93200		179000	ug/kg		89.5	(75%-125%)		12/06/19	18:40
Zinc	96300	56100		145000	ug/kg		91.9	(75%-125%)			
QC1204447666	498097011	MSD									
Aluminum	959000	29400000		40600000	ug/kg	6.5	N/A	(0%-20%)		12/06/19	18:42

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QC Summary

Workorder: 498097

Page 9 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Antimony	95900	U	ND	78100	ug/kg	3.18	81.4	(0%-20%)	TXT1	12/06/19	18:42
Arsenic	95900	J	4600	83500	ug/kg	0.131	82.3	(0%-20%)			
Barium	95900		153000	240000	ug/kg	2.34	90.8	(0%-20%)			
Beryllium	95900		1880	88900	ug/kg	2.01	90.7	(0%-20%)			
Cadmium	95900	U	ND	82300	ug/kg	1.72	85.8	(0%-20%)			
Calcium	959000		191000	1080000	ug/kg	1.53	92.9	(0%-20%)		12/09/19	12:50
Chromium	95900		36400	121000	ug/kg	1.37	88.3	(0%-20%)		12/06/19	18:42
Cobalt	95900		8470	93100	ug/kg	2.04	88.2	(0%-20%)			
Copper	95900		24300	117000	ug/kg	1.54	97	(0%-20%)			
Iron	959000		19100000	22000000	ug/kg	7.07	N/A	(0%-20%)			
Lead	95900		33900	116000	ug/kg	3.98	85.5	(0%-20%)			
Magnesium	959000		2920000	3690000	ug/kg	6.6	80.5	(0%-20%)			
Manganese	95900		175000	246000	ug/kg	9.03	73.6*	(0%-20%)			
Nickel	95900		13500	99300	ug/kg	1.43	89.5	(0%-20%)			
Potassium	959000		1370000	2170000	ug/kg	6.15	83.2	(0%-20%)			

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QC Summary

Workorder: 498097

Page 10 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Selenium	95900	U	ND	78700	ug/kg	1.61	81.5	(0%-20%)	TXT1	12/06/19	18:42
Silver	19200	U	ND	15200	ug/kg	3.16	79.4	(0%-20%)		12/06/19	18:53
Thallium	95900	U	ND	84000	ug/kg	1.93	87.6	(0%-20%)			
Vanadium	95900		93200	179000	ug/kg	0.0181	89.9	(0%-20%)		12/06/19	18:42
Zinc	95900		56100	143000	ug/kg	1.37	90.3	(0%-20%)			
QC1204451031	498097011 PS										
Manganese	500		960	1480	ug/L		105	(75%-125%)		12/09/19	12:52
QC1204447667	498097011 SDILT										
Aluminum			161000	35400	ug/L	10.2		(0%-20%)		12/06/19	18:44
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	25.2	J	7.68	ug/L	52.7	(0%-20%)			
Barium			839		180	ug/L	7.1	(0%-20%)			
Beryllium			10.3	J	2.13	ug/L	3.78	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			1040	J	236	ug/L	12.9	(0%-20%)		12/09/19	12:57
Chromium			199		43.0	ug/L	7.98	(0%-20%)		12/06/19	18:44
Cobalt			46.3		10.4	ug/L	12.2	(0%-20%)			

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QC Summary

Workorder: 498097

Page 11 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945551										
Copper		133		27.5	ug/L	3.31		(0%-20%)	TXT1	12/06/19	18:44
Iron		105000		23000	ug/L	9.96		(0%-20%)			
Lead		185		39.0	ug/L	5.26		(0%-20%)			
Magnesium		16000		3470	ug/L	8.74		(0%-20%)			
Manganese		960		208	ug/L	8.36		(0%-20%)			
Nickel		73.7		16.1	ug/L	9.38		(0%-20%)			
Potassium		7510		1570	ug/L	4.75		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/06/19	18:56
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium		510		107	ug/L	5		(0%-20%)		12/06/19	18:44
Zinc		307		67.7	ug/L	10.2		(0%-20%)			
<hr/>											
Batch	1945555										
QC1204447681	LCS										
Aluminum	5000			4730	ug/L		94.6	(80%-120%)	TXT1	12/06/19	16:37
Antimony	500			467	ug/L		93.5	(80%-120%)			
Arsenic	500			453	ug/L		90.6	(80%-120%)			

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QC Summary

Workorder: 498097

Page 12 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Barium	500			471	ug/L		94.3	(80%-120%)	TXT1	12/06/19	16:37
Beryllium	500			474	ug/L		94.8	(80%-120%)			
Cadmium	500			472	ug/L		94.4	(80%-120%)			
Calcium	5000			4780	ug/L		95.6	(80%-120%)			
Chromium	500			481	ug/L		96.1	(80%-120%)			
Cobalt	500			478	ug/L		95.6	(80%-120%)			
Copper	500			477	ug/L		95.5	(80%-120%)			
Iron	5000			4790	ug/L		95.8	(80%-120%)			
Lead	500			466	ug/L		93.2	(80%-120%)			
Magnesium	5000			4790	ug/L		95.8	(80%-120%)			
Manganese	500			472	ug/L		94.5	(80%-120%)			
Nickel	500			485	ug/L		97	(80%-120%)			
Potassium	5000			4640	ug/L		92.8	(80%-120%)			
Selenium	500			450	ug/L		90	(80%-120%)			
Silver	100			93.4	ug/L		93.4	(80%-120%)			

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QC Summary

Workorder: 498097

Page 13 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Sodium	5000			4610	ug/L		92.2	(80%-120%)	TXT1	12/06/19	16:37
Thallium	500			474	ug/L		94.9	(80%-120%)			
Vanadium	500			478	ug/L		95.6	(80%-120%)			
Zinc	500			466	ug/L		93.2	(80%-120%)			
QC1204447682	LCSD										
Aluminum	5000			4760	ug/L	0.717	95.2	(0%-20%)		12/06/19	16:40
Antimony	500			464	ug/L	0.646	92.9	(0%-20%)			
Arsenic	500			453	ug/L	0.0486	90.6	(0%-20%)			
Barium	500			473	ug/L	0.309	94.6	(0%-20%)			
Beryllium	500			477	ug/L	0.606	95.4	(0%-20%)			
Cadmium	500			472	ug/L	0.0805	94.4	(0%-20%)			
Calcium	5000			4800	ug/L	0.488	96.1	(0%-20%)			
Chromium	500			473	ug/L	1.57	94.6	(0%-20%)			
Cobalt	500			478	ug/L	0.00419	95.6	(0%-20%)			
Copper	500			480	ug/L	0.493	95.9	(0%-20%)			
Iron	5000			4770	ug/L	0.328	95.4	(0%-20%)			

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QC Summary

Workorder: 498097

Page 14 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Lead	500			465	ug/L	0.275	93	(0%-20%)	TXT1	12/06/19	16:40
Magnesium	5000			4840	ug/L	0.918	96.7	(0%-20%)			
Manganese	500			472	ug/L	0.0233	94.5	(0%-20%)			
Nickel	500			475	ug/L	2.23	94.9	(0%-20%)			
Potassium	5000			4710	ug/L	1.4	94.1	(0%-20%)			
Selenium	500			449	ug/L	0.222	89.8	(0%-20%)			
Silver	100			93.8	ug/L	0.503	93.8	(0%-20%)			
Sodium	5000			4690	ug/L	1.75	93.8	(0%-20%)			
Thallium	500			475	ug/L	0.166	95	(0%-20%)			
Vanadium	500			480	ug/L	0.374	95.9	(0%-20%)			
Zinc	500			467	ug/L	0.189	93.4	(0%-20%)			
QC1204447680	MB										
Aluminum			U	ND	ug/L					12/06/19	16:33
Antimony			U	ND	ug/L						
Arsenic			U	ND	ug/L						
Barium			U	ND	ug/L						

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QC Summary

Workorder: 498097

Page 15 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Beryllium			U	ND	ug/L				TXT1	12/06/19	16:33
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium			J	2.21	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						
Manganese			U	ND	ug/L						
Nickel			U	ND	ug/L						
Potassium			U	ND	ug/L						
Selenium			U	ND	ug/L						
Silver			U	ND	ug/L						
Sodium			U	ND	ug/L						

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

QC Summary

Workorder: 498097

Page 16 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Thallium			U	ND	ug/L				TXT1	12/06/19	16:33
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204447683 498097007 SDILT											
Aluminum	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/06/19	16:46
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Copper	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			

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QC Summary

Workorder: 498097

Page 17 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1945555										
Magnesium	U	ND	U	ND	ug/L	N/A		(0%-20%)	TXT1	12/06/19	16:46
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Nickel	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	U	ND	U	ND	ug/L	N/A		(0%-20%)			
<hr/>											
Batch	1947080										
QC1204451332	LCS										
Sodium	478000			462000	ug/kg		96.6	(80%-120%)	LS	12/10/19	13:51
QC1204451331	MB										
Sodium			U	ND	ug/kg					12/10/19	13:48
QC1204451333	498097011 MS										
Sodium	926000	84100		909000	ug/kg		89	(75%-125%)		12/10/19	13:55
QC1204451334	498097011 MSD										
Sodium	853000	84100		899000	ug/kg	1.09	95.6	(0%-20%)		12/10/19	13:57

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QC Summary

Workorder: 498097

Page 18 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch 1947080											
QC1204451335	498097011	SDILT									
Sodium		439	J	96.1	ug/L	9.37		(0%-20%)	LS	12/10/19	14:00
Metals Analysis-Mercury											
Batch 1945742											
QC1204448131	496108001	DUP									
Mercury	U	ND	U	ND	ug/L	N/A			CW2	12/06/19	09:56
QC1204448127	LCS										
Mercury	2.00			2.03	ug/L		102	(80%-120%)		12/06/19	09:53
QC1204448126	MB										
Mercury			U	ND	ug/L					12/06/19	09:51
QC1204448132	496108001	MS									
Mercury	2.00	U	ND	1.94	ug/L		97.1	(75%-125%)		12/06/19	09:58
QC1204448133	496108001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		12/06/19	09:59
Batch 1945748											
QC1204448147	498097011	DUP									
Mercury	J	76.6	J	78.7	ug/kg	2.61 ^		(+/-92.8)	CW2	12/06/19	10:55
QC1204448146	LCS										
Mercury	221			197	ug/kg		89.1	(80%-120%)		12/06/19	10:33
QC1204448145	MB										
Mercury			U	ND	ug/kg					12/06/19	10:31
QC1204448148	498097011	MS									
Mercury	401	J	76.6	432	ug/kg		88.6	(80%-120%)		12/06/19	10:57

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QC Summary

Workorder: 498097

Page 19 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 1945748											
QC1204448149	498097011	SDILT									
Mercury	J	0.358	U	ND	ug/L	N/A		(0%-10%)	CW2	12/06/19	10:58
Nutrient Analysis											
Batch 1945071											
QC1204446624	497904007	DUP									
Nitrogen, Ammonia		0.102		0.0885	mg/L	14.2 ^		(+/-0.050)	KLP1	12/10/19	09:50
QC1204446623	LCS										
Nitrogen, Ammonia	1.00			0.922	mg/L		92.2	(90%-110%)		12/10/19	09:47
QC1204446622	MB										
Nitrogen, Ammonia			U	ND	mg/L					12/10/19	09:46
QC1204446625	497904007	MS									
Nitrogen, Ammonia	1.00	0.102		1.05	mg/L		94.8	(90%-110%)		12/10/19	09:51
Batch 1945285											
QC1204448987	498097011	DUP									
Nitrogen, Ammonia		321		383	mg/kg	17.8		(0%-20%)	KLP1	12/10/19	11:06
QC1204447096	LCS										
Nitrogen, Ammonia	50.0			48.9	mg/kg		97.8	(90%-110%)		12/10/19	10:24
QC1204447095	MB										
Nitrogen, Ammonia			J	0.975	mg/kg					12/10/19	10:19
QC1204448988	498097011	MS									
Nitrogen, Ammonia	79.3	321		440	mg/kg		N/A	(90%-110%)		12/10/19	11:07

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported

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QC Summary

Workorder: 498097

Page 20 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
B											
E											
E											
FB											
H											
J											
J											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

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QC Summary

Report Date: December 11, 2019

Page 1 of 4

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

Contact: Ms. Cynthia Logsdon

Workorder: 498097

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1945391										
QC1204447353	LCS										
Pct Uranium-235				0.935	percent				MXS2	12/05/19	12:15
Uranium-233/234				11.6	pCi/L						
	Uncertainty			+/-1.20							
Uranium-235/236				0.776	pCi/L						
	Uncertainty			+/-0.354							
Uranium-238	13.6			12.8	pCi/L		93.7	(75%-125%)			
	Uncertainty			+/-1.25							
QC1204447354	LCSD										
Pct Uranium-235				0.682	percent	31.2				12/05/19	12:15
Uranium-233/234				13.9	pCi/L	17.8					
	Uncertainty			+/-1.51							
Uranium-235/236				0.668	pCi/L	14.9					
	Uncertainty			+/-0.386							
Uranium-238	13.6			15.1	pCi/L	16.7	111	(0%-20%)			
	Uncertainty			+/-1.57							
QC1204447352	MB										
Pct Uranium-235			U	0.00	percent					12/05/19	12:15
Uranium-233/234			U	0.0126	pCi/L						
	Uncertainty			+/-0.107							
Uranium-235/236			U	0.0665	pCi/L						
	Uncertainty			+/-0.131							
Uranium-238			U	0.108	pCi/L						
	Uncertainty			+/-0.136							

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QC Summary

Workorder: 498097

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1945413										
QC1204447391	498097011	DUP									
Uranium-233/234		2.05		2.26	pCi/g	9.82		(0%-20%)	MXS2	12/07/19	08:57
	Uncertainty	+/-0.511		+/-0.500							
Uranium-235/236	U	-0.0281		0.104	pCi/g	78.6		N/A			
	Uncertainty	+/-0.0848		+/-0.137							
Uranium-238		1.74		1.58	pCi/g	10.1		(0%-20%)			
	Uncertainty	+/-0.468		+/-0.419							
QC1204447392	LCS										
Uranium-233/234				10.9	pCi/g					12/07/19	08:57
	Uncertainty			+/-1.06							
Uranium-235/236				0.547	pCi/g						
	Uncertainty			+/-0.272							
Uranium-238	12.1			10.8	pCi/g		89.3	(75%-125%)			
	Uncertainty			+/-1.05							
QC1204447390	MB										
Uranium-233/234			U	-0.0381	pCi/g					12/07/19	08:57
	Uncertainty			+/-0.0704							
Uranium-235/236			U	-0.0101	pCi/g						
	Uncertainty			+/-0.087							
Uranium-238			U	-0.0163	pCi/g						
	Uncertainty			+/-0.0722							
Rad Liquid Scintillation											
Batch	1945548										
QC1204447658	LCS										
Technetium-99		854		871	pCi/L		102	(75%-125%)	JJ3	12/10/19	05:15
	Uncertainty			+/-44.4							
QC1204447659	LCSD										
Technetium-99		854		671	pCi/L	26*	78.5	(0%-20%)		12/10/19	05:37
	Uncertainty			+/-40.2							
QC1204447656	MB										
Technetium-99			U	12.5	pCi/L					12/10/19	04:54
	Uncertainty			+/-23.3							

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QC Summary

Workorder: 498097

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1945561										
QC1204447697	498097011	DUP									
Technetium-99	U	6.19	U	2.84	pCi/g	N/A		N/A	JJ3	12/10/19	10:30
	Uncertainty	+/-23.5		+/-21.4							
QC1204447698	LCS										
Technetium-99	467			443	pCi/g		94.9	(75%-125%)		12/10/19	10:52
	Uncertainty			+/-25.9							
QC1204447696	MB										
Technetium-99			U	-0.0572	pCi/g					12/10/19	10:08
	Uncertainty			+/-14.5							

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
- 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.
- NI 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

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QC Summary

Workorder: 498097

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 #: 498097**

Metals

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1945551

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1945549

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447663	Method Blank (MB)ICP
1204447664	Laboratory Control Sample (LCS)
1204447667	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204447665	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447666	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)
1204451031	498097011(SED-55 0"-6"PS) 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

CRDL/PQL Requirements

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

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 analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204447666 (SED-55 0"-6"MSD)	Manganese	73.6* (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. Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 498097001 (SED-51 6"-12"), 498097003 (SED-52 0"-6"), 498097004 (SED-52 6"-12"), 498097005 (SED-53 0"-6"), 498097008 (SED-56 6"-12"), 498097009 (SED-54 0"-6"), 498097010 (SED-54 6"-12"), 498097011 (SED-55 0"-6"), 498097012 (SED-55 6"-12"), 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6"). Sample required dilution in order to minimize suppression of thallium due to matrix interferences. 498097002 (SED-51 0"-6"). Sample required dilution in order to minimize suppression of antimony, silver and thallium due to matrix interferences. 498097006 (SED-53 6"-12").

Analyte	498097									
	001	002	003	004	005	006	008	009	010	011
Antimony	1X	1X	1X	1X	1X	10X	1X	1X	1X	1X
Silver	10X	1X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	1X	10X	1X	10X	10X	10X

Analyte	498097		
	012	013	014
Silver	10X	10X	10X
Thallium	10X	10X	10X

Product: Determination of Metals by ICP

Analytical Method: SW846 3005A/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1945555

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 1945554

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204447680	Method Blank (MB)ICP
1204447681	Laboratory Control Sample (LCS)
1204447682	Laboratory Control Sample Duplicate (LCSD)
1204447683	498097007(EB-01-112719L) Serial Dilution (SD)

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.

Calibration Information

CRDL/PQL Requirements

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

Quality Control (QC) Information

Laboratory Control Sample Duplicate (LCSD)

An LCSD was used in place of matrix QC due to limited sample volume.

Product: Determination of Metals by ICP

Analytical Method: SW846 3050B/6010D

Analytical Procedure: GL-MA-E-013 REV# 31

Analytical Batch: 1947080

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1947079

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"

498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204451331	Method Blank (MB)ICP
1204451332	Laboratory Control Sample (LCS)
1204451335	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204451333	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204451334	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

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.

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3050B/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1945538

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 28

Preparation Batch: 1945537

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"

1204447624	Method Blank (MB)ICP-MS
1204447625	Laboratory Control Sample (LCS)
1204447653	Laboratory Control Sample (LCS)
1204447628	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204447626	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447654	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447627	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)
1204447655	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	498097									
	001	002	003	004	005	006	008	009	010	011
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	498097		
	012	013	014
Uranium-234	2X	2X	2X
Uranium-235	2X	2X	2X
Uranium-238	2X	2X	2X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3010A/6020B

Analytical Procedure: GL-MA-E-014 REV# 33

Analytical Batch: 1945540

Preparation Method: SW846 3010A

Preparation Procedure: GL-MA-E-008 REV# 19

Preparation Batch: 1945539

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204447629	Method Blank (MB)ICP-MS
1204447630	Laboratory Control Sample (LCS)
1204447651	Laboratory Control Sample (LCS)
1204447631	Laboratory Control Sample Duplicate (LCSD)
1204447652	Laboratory Control Sample Duplicate (LCSD)
1204447632	497772015(EB-01-112219L) Serial Dilution (SD)

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.

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

Laboratory Control Sample Duplicate (LCSD)

An LCSD was used in place of matrix QC due to the designation of field QC.

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 1945742

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 1945741

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204448126	Method Blank (MB)CVAA

1204448127	Laboratory Control Sample (LCS)
1204448133	496108001(NonSDGL) Serial Dilution (SD)
1204448131	496108001(NonSDGD) Sample Duplicate (DUP)
1204448132	496108001(NonSDGS) Matrix Spike (MS)

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: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7471A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 1945748

Preparation Method: SW846 7471A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 1945746

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204448145	Method Blank (MB)CVAA
1204448146	Laboratory Control Sample (LCS)
1204448149	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204448147	498097011(SED-55 0"-6"D) Sample Duplicate (DUP)
1204448148	498097011(SED-55 0"-6"S) Matrix Spike (MS)

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.

General Chemistry

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batch: 1945533

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204447633	Method Blank (MB)
1204447634	Laboratory Control Sample (LCS)
1204447637	498037002(NonSDG) Sample Duplicate (DUP)
1204447638	498037002(NonSDG) Post Spike (PS)

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.

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	1204447638 (Non SDG 498037002PS)	89.2* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1204447637 (Non SDG 498037002DUP) and 1204447638 (Non SDG 498037002PS) were diluted because target analyte concentrations exceeded the calibration range. 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.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1945544 and 1945543

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
1204447647	Method Blank (MB)
1204447648	Laboratory Control Sample (LCS)
1204447649	498097001(SED-51 6"-12") Sample Duplicate (DUP)
1204447650	498097001(SED-51 6"-12") 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	1204447650 (SED-51 6"-12"MS)	19.5* (75%-125%)

Miscellaneous Information

Manual Integrations

Samples 498097005 (SED-53 0"-6"), 498097006 (SED-53 6"-12"), 498097008 (SED-56 6"-12") and 498097009 (SED-54 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1945958 and 1945955

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097010	SED-54 6"-12"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"

1204448642	Method Blank (MB)
1204448643	Laboratory Control Sample (LCS)
1204448644	498097010(SED-54 6"-12") Sample Duplicate (DUP)
1204448645	498097010(SED-54 6"-12") 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	1204448645 (SED-54 6"-12"MS)	20.6* (75%-125%)

Miscellaneous Information

Manual Integrations

Samples 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ion Chromatography

Analytical Method: SW846 9056A

Analytical Procedure: GL-GC-E-086 REV# 27

Analytical Batches: 1946463 and 1946461

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097011	SED-55 0"-6"
1204449642	Method Blank (MB)
1204449643	Laboratory Control Sample (LCS)
1204451547	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204451548	498097011(SED-55 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204451548 (SED-55 0"-6"MS)	26* (75%-125%)

Miscellaneous Information

Manual Integrations

Samples 1204451547 (SED-55 0"-6"DUP) and 498097011 (SED-55 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

Product: Ammonia Nitrogen

Preparation Method: EPA 350.1

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1945071

Preparation Method: EPA 350.1 Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1945070

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204446622	Method Blank (MB)
1204446623	Laboratory Control Sample (LCS)
1204446624	497904007(NonSDG) Sample Duplicate (DUP)
1204446625	497904007(NonSDG) Matrix Spike (MS)

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: Ammonia Nitrogen

Preparation Method: EPA 350.1 Modified

Preparation Procedure: GL-GC-E-106 REV# 10

Preparation Batch: 1945285

Preparation Method: EPA 350.2 Modified Prep

Preparation Procedure: GL-GC-E-072 REV# 18

Preparation Batch: 1945284

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447095	Method Blank (MB)
1204447096	Laboratory Control Sample (LCS)
1204448987	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204448988	498097011(SED-55 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1204448987 (SED-55 0"-6"DUP), 1204448988 (SED-55 0"-6"MS), 498097001 (SED-51 6"-12"), 498097002 (SED-51 0"-6"), 498097003 (SED-52 0"-6"), 498097004 (SED-52 6"-12"), 498097005 (SED-53 0"-6"), 498097006 (SED-53 6"-12"), 498097008 (SED-56 6"-12"), 498097009 (SED-54 0"-6"), 498097010 (SED-54 6"-12"), 498097011 (SED-55 0"-6"), 498097012 (SED-55 6"-12"), 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6") were diluted because target analyte concentrations exceeded the calibration range. 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.

Analyte	498097										
	001	002	003	004	005	006	008	009	010	011	
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X	

Analyte	498097		
	012	013	014
Nitrogen, Ammonia	5X	5X	5X

Radiochemistry

Product: Alphaspec U, Liquid

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1945391

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204447352	Method Blank (MB)
1204447353	Laboratory Control Sample (LCS)
1204447354	Laboratory Control Sample Duplicate (LCSD)

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: Alphaspec U, Soil/Veg

Analytical Method: DOE EML HASL-300, U-02-RC Modified

Analytical Procedure: GL-RAD-A-011 REV# 27

Analytical Batch: 1945413

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1945402

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447390	Method Blank (MB)
1204447391	498097011(SED-55 0"-6") Sample Duplicate (DUP)

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 498097006 (SED-53 6"-12") was recounted due to poor resolution. The recount is reported.

Miscellaneous Information

Additional Comments

Sample 498097003 (SED-52 0"-6") did not meet the resolution requirement of having a full width half maximum of 100 keV or less for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest. The tracer peak centroid for sample 498097003 (SED-52 0"-6") 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: Dry Weight

Analytical Method: ASTM D 2216 (Modified)

Analytical Procedure: GL-OA-E-020 REV# 13

Analytical Batch: 1945402

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23

Preparation Batch: 1945402

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447382	498097001(SED-51 6"-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, Liquid

Analytical Method: DOE EML HASL-300, Tc-02-RC Modified

Analytical Procedure: GL-RAD-A-059 REV# 5

Analytical Batch: 1945548

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097007	EB-01-112719
498097015	EB-01 120219
1204447656	Method Blank (MB)
1204447658	Laboratory Control Sample (LCS)
1204447659	Laboratory Control Sample Duplicate (LCSD)

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.

Quality Control (QC) Information

Duplication Criteria between LCS and LCSD

The Laboratory Control Sample and Laboratory Control Sample Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1204447658 (LCS) and 1204447659 (LCSD)	Technetium-99	RPD 26* (0%-20%)

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: 1945561

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447696	Method Blank (MB)
1204447697	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204447698	Laboratory Control Sample (LCS)

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 2
 Project #: 60595649
 GEL Quote #: _____
 QOC Number (1): _____
 PO Number: _____

Client Name: WESTINGHOUSE Phone #: 803 647 1920
 Project/Site Name: RI IMPLEMENTATION Fax #: _____
 Address: 5801 BLUFF RD WORKS SC
 Collected by: JAMES LEAPHART Send Results To: DIANA JOYNER

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)						Comments		
						Radioactive	TSCA Regulated		SA	PI	NI	NI	SA	PI		NI	NI
SED-51 6:12"	11-27-19	1005	G	N	SD	2		1	X	X	X	X	X	X	X		
SED-51 0:26"		1000	G	2	SD	2		1	X	X	X	X	X	X	X		
SED-52 0:26"		1100	G	2	SD	2		1	X	X	X	X	X	X	X		
SED-52 6:12"		1105	G	2	SD	2		1	X	X	X	X	X	X	X		
SED-53 0:26"		1300	G	2	SA	2		1	X	X	X	X	X	X	X		
SED-53 6:12"		1305	G	2	SA	2		1	X	X	X	X	X	X	X		
GB-01-112719		1230	EB	2	L	2		3									
SED-56 6:12"	12-2-19	1130	G	2	SA	2		1	X	X	X	X	X	X	X		

TAT Requested: Normal: 12/14/19 Rush: X Specify: Results by 12/13/19 (Subject to Surcharges) Fax Results: Yes / No
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4
 Sample Collection Time Zone: Eastern Pacific Other _____
 Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Chain of Custody Signatures		
Relinquished By (Signed)	Date	Time
<u>J. Leaphart</u>	12-3-19	0846
<u>J. Cruss</u>	12/4/19	1038
<u>J. Cruss</u>	12-4-19	1100

Received by (signed) Date Time
J. Cruss 12/3/19 0846
J. Cruss 12/4/19 1038
J. Cruss 12-4-19 1100

Method of Shipment: _____ Date Shipped: _____
 Airbill #: _____
 Airbill #: _____

For Lab Receiving Use Only
 Custody Seal Intact? YES / NO
 Cooler Temp: _____

1.) Chain of Custody Number = Chain Determined
 2.) Codes: N = Not Determined, 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 the sample was field filtered or -N- for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=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
 WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

SAMPLE RECEIPT & REVIEW FORM

499 097

Client: <u>WVNC WVNCU #1215</u>		SDG/AR/COC/Work Order:	
Received By: <u>S BOONE</u>		Date Received: <u>12/4/19</u>	
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?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria		Yes	NA
		Yes	No
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ deg. C)?*	<input checked="" type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry Ice None Other: *all temperatures are recorded in Celsius
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>TR1-19</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ 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?	<input checked="" type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials SH Date 12/5/19 Page 1 of 1

List of current GEL Certifications as of 11 December 2019

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	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780