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

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

Direct tel: 803.647.1920
Direct fax: 803.695.3964
e-mail: joynerdp@westinghouse.com
Your ref:
Our ref: LTR-RAC-22-22

April 5, 2022

Subject: **March** 2022 CA Progress Report

Ms. Kuhn:

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

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

In response to the above requirements, the following is being reported to the Department since the last progress report submitted on **March 8, 2022.** The following progress report is for work occurring from **March 1- 31, 2022**:

(a) Actions during the previous month:

- Completed the following to support completion of the **RI Report**, **Item 6** of the CA:
  - Conducted soil sampling under two intermodal container storage sheds (S-04 and S-06) removed from the Southern Storage Area Operable Unit.
  - Scheduled a groundwater to surface water conceptual model discussion with DHEC personnel.

- Completed the following to support **Cultural Resources Survey** Activities:
  - CFFF modified its Cultural Resources Procedures, RA-432 and associated sketch RAS-432-1 to incorporate the recommendations resulting from the cultural resources survey.
  - CFFF extended the fence on the eastern boundary of the Denley Cemetery an additional ten feet as recommended in the cultural resources survey report.

(b) Results of sampling and tests:

Soil Sampling Results Under Sheds S-04 and S-06

- On March 4, 2022, Westinghouse conducted systematic soil sampling in accordance with the approved SSA OU Soil Sampling Work Plan in the former footprint of two sheds (S-04 and S-06). Final analytical results were received from the external laboratory in March. All soil samples collected were below residential screening levels. A consolidated data table and graphic of sampling locations are included as **Attachment A** of this monthly report.

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

In accordance with **Item 4** of the CA, Westinghouse will continue to implement the Work Plan to include the following actions:

- Ship the last two trailers containing legacy UF_6 cylinders following Nuclear Regulatory Commission (NRC) approval of the Alternate Disposal Request on March 18, 2022.
- Continue working on item #6 of the Consent Agreement, the Remedial Investigation Report.
- Complete draft Baseline Risk Assessment and begin CFFF internal review.
- Revise the draft cultural resources report to include recommendations made by the State Historic Preservation Office (SHPO) & other stakeholders and resubmit the draft for final review by the SHPO.
- Conduct semi-annual groundwater sampling (118 wells).

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

- 55% of the **RI Report** scope is completed.
- 100% of Phase II **field** work scope completed.
- Currently there are no anticipated delays.

Respectfully,

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

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

Attachment A: Soil Sampling Results Under Sheds S-04 and S-06

Attachment A

Soil Sampling Results Under Sheds S-04 and S-06

Tabulated Soil Sampling Results and Sum of Fractions Calculations

Soil Sampling Location Map

GEL Laboratory Results
Sampling conducted: March 4, 2022
GEL Work Order: 572654
Report Date: March 22, 2022

Attachment A

Soil Sampling Results Under Sheds S-04 and S-06

Sample ID	Analyte (pCi/g)									SOF	SOF
	U-234		U-235 DL	U-235	U-238	Sum U		Tc-99 DL	Tc-99	Resid.	Ind.
S-6-1	1.68	<	0.231	0.229	1.51	3.42	<	0.734	0	0.27	0.01
S-6-2	1.39	<	0.247	0	1.45	2.84	<	0.771	0	0.21	0.01
S-4/6-3	1.36	<	0.141	0.0471	0.813	2.22	<	0.706	0	0.17	0.01
S-4-4	1.65	<	0.216	0.0984	1.41	3.16	<	0.667	0	0.24	0.01
S-4-5	1.60	<	0.213	0.211	1.86	3.67	<	0.686	0	0.28	0.02

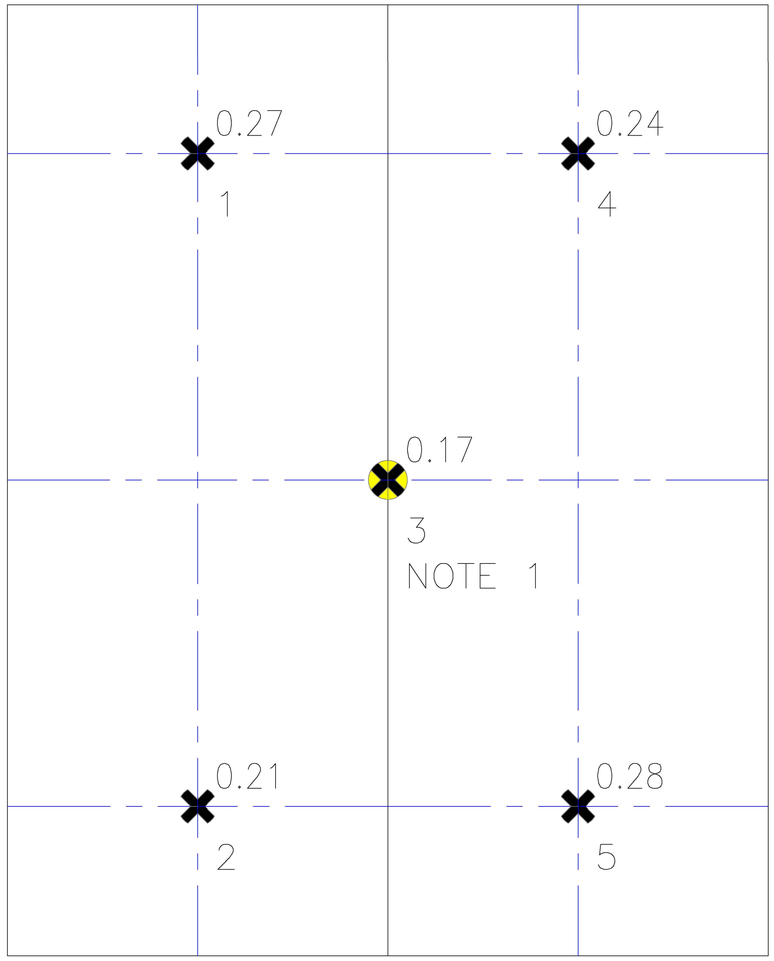
Notes:

Negative values reflected as zero

All VOC results, including tetrachloroethylene were non-detectable.

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

REAR REAR



FRONT (ENTRANCE) *S-6*

FRONT (ENTRANCE) *S-4*

TO TRAILER 8

NOTES

1) TCE IS NON-DETECTABLE: <0.299 ug/kg
2) RESULTS AT EACH SAMPLE POINT ARE RESIDENTIAL SUM OF FRACTIONS.

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

SUM OF FRACTIONS OF ISOTOPIC URANIUM IN SOIL BENEATH SEA-LAND CONTAINERS

REMOVAL CAMPAIGN #S4-S6

SHEET # 1

AUTOCAD DRAWING DO NOT REVISE MANUALLY

GEL Laboratories LLC
a member of The GEL Group INC

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

gel.com

March 22, 2022

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

Re: Sealand Soil Sampling
Work Order: 572654

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 09, 2022. 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. 4523.

Sincerely,

Delaney Stone

Delaney Stone for
Samuel Hogan
Project Manager

Purchase Order: 4500822910 Ln 1
Enclosures

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

Certificate of Analysis Report
for

WNUC010 Westinghouse Electric Company PO (4500822910)

Client SDG: 572654 GEL Work Order: 572654

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

B The target analyte was detected in the associated blank.

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, Samuel Hogan.

Reviewed by Delaney Stone

GEL Laboratories LLC
a member of The GEL Group INC

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

Analytical Detections Summary

SDG/Report#	572654	**Client**	Westinghouse Electric Company PO (4500822910)
Project ID	Sealand Soil Sampling		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
572654001	S-6-1	DOE EML HASL-300, U-02-RC Modified	13968-55-3/13966-29-5	Uranium-233/234	1.68 pCi/g	
			7440-61-1	Uranium-238	1.51 pCi/g	
572654002	S-6-2	DOE EML HASL-300, U-02-RC Modified	13968-55-3/13966-29-5	Uranium-233/234	1.39 pCi/g	
			7440-61-1	Uranium-238	1.45 pCi/g	
572654003	S-4/6-3	DOE EML HASL-300, U-02-RC Modified	13968-55-3/13966-29-5	Uranium-233/234	1.36 pCi/g	
			7440-61-1	Uranium-238	0.813 pCi/g	
572654004	S-4-4	DOE EML HASL-300, U-02-RC Modified	13968-55-3/13966-29-5	Uranium-233/234	1.65 pCi/g	
			7440-61-1	Uranium-238	1.41 pCi/g	
572654005	S-4-5	DOE EML HASL-300, U-02-RC Modified	13968-55-3/13966-29-5	Uranium-233/234	1.6 pCi/g	
			7440-61-1	Uranium-238	1.86 pCi/g	

NOTE: This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.

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

Certificate of Analysis

Report Date: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-4/6-3
Sample ID: 572654003
Matrix: Soil
Collect Date: 04-MAR-22 09:51
Receive Date: 09-MAR-22
Collector: Client
Moisture: 11%

Project: WNUC01222
Client ID: WNUC010

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260D VOC "Dry Weight Corrected"												
1,1,1,2-Tetrachloroethane	U	ND	0.299	0.898	ug/kg	0.800	1	JM6	03/16/22	1428	2241941	1
1,1,1-Trichloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,1,2,2-Tetrachloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,1,2-Trichloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,1-Dichloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,1-Dichloroethylene	U	ND	0.299	0.898	ug/kg	0.800	1					
1,2,3-Trichloropropane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,2,4-Trichlorobenzene	U	ND	0.299	0.898	ug/kg	0.800	1					
1,2-Dibromo-3-chloropropane	U	ND	0.449	0.898	ug/kg	0.800	1					
1,2-Dibromoethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,2-Dichloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
1,2-Dichloropropane	U	ND	0.299	0.898	ug/kg	0.800	1					
2-Butanone	U	ND	1.50	4.49	ug/kg	0.800	1					
2-Chloro-1,3-butadiene	U	ND	0.299	0.898	ug/kg	0.800	1					
2-Hexanone	U	ND	1.50	4.49	ug/kg	0.800	1					
4-Methyl-2-pentanone	U	ND	1.50	4.49	ug/kg	0.800	1					
Acetone	U	ND	1.50	4.49	ug/kg	0.800	1					
Acetonitrile	U	ND	7.49	22.5	ug/kg	0.800	1					
Acrolein	U	ND	1.50	4.49	ug/kg	0.800	1					
Acrylonitrile	U	ND	1.50	4.49	ug/kg	0.800	1					
Allyl chloride	U	ND	1.50	4.49	ug/kg	0.800	1					
Benzene	U	ND	0.299	0.898	ug/kg	0.800	1					
Bromodichloromethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Bromoform	U	ND	0.299	0.898	ug/kg	0.800	1					
Bromomethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Carbon disulfide	U	ND	1.50	4.49	ug/kg	0.800	1					
Carbon tetrachloride	U	ND	0.299	0.898	ug/kg	0.800	1					
Chlorobenzene	U	ND	0.299	0.898	ug/kg	0.800	1					
Chloroethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Chloroform	U	ND	0.299	0.898	ug/kg	0.800	1					
Chloromethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Dibromochloromethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Dibromomethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Dichlorodifluoromethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Ethyl methacrylate	U	ND	1.50	4.49	ug/kg	0.800	1					
Ethylbenzene	U	ND	0.299	0.898	ug/kg	0.800	1					

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

Certificate of Analysis

Report Date: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-4/6-3 Project: WNUC01222
Sample ID: 572654003 Client ID: WNUC010

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260D VOC "Dry Weight Corrected"												
Iodomethane	U	ND	1.50	4.49	ug/kg	0.800	1					
Isobutyl alcohol	U	ND	15.0	44.9	ug/kg	0.800	1					
Methacrylonitrile	U	ND	1.50	4.49	ug/kg	0.800	1					
Methyl methacrylate	U	ND	1.50	4.49	ug/kg	0.800	1					
Methylene chloride	U	ND	1.50	4.49	ug/kg	0.800	1					
Pentachloroethane	U	ND	1.50	4.49	ug/kg	0.800	1					
Propionitrile	U	ND	1.50	4.49	ug/kg	0.800	1					
Styrene	U	ND	0.299	0.898	ug/kg	0.800	1					
Tetrachloroethylene	U	ND	0.299	0.898	ug/kg	0.800	1					
Toluene	U	ND	0.299	0.898	ug/kg	0.800	1					
Trichloroethylene	U	ND	0.299	0.898	ug/kg	0.800	1					
Trichlorofluoromethane	U	ND	0.299	0.898	ug/kg	0.800	1					
Vinyl acetate	U	ND	1.50	4.49	ug/kg	0.800	1					
Vinyl chloride	U	ND	0.299	0.898	ug/kg	0.800	1					
Xylenes (total)	U	ND	0.898	2.70	ug/kg	0.800	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	1.50	4.49	ug/kg	0.800	1					
cis-1,3-Dichloropropylene	U	ND	0.299	0.898	ug/kg	0.800	1					
trans-1,2-Dichloroethylene	U	ND	0.299	0.898	ug/kg	0.800	1					
trans-1,3-Dichloropropylene	U	ND	0.299	0.898	ug/kg	0.800	1					
trans-1,4-Dichloro-2-butene	U	ND	1.50	4.49	ug/kg	0.800	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 5035	5035 Prep	JM6	03/04/22	0951	2241938

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1,2-Dichloroethane-d4	SW846 8260D VOC "Dry Weight Corrected"	43.1 ug/kg	50.0	96	(76%-127%)
Bromofluorobenzene	SW846 8260D VOC "Dry Weight Corrected"	47.1 ug/kg	50.0	105	(70%-130%)
Toluene-d8	SW846 8260D VOC "Dry Weight Corrected"	44.6 ug/kg	50.0	99	(81%-120%)

Notes:

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

Certificate of Analysis

Report Date: March 22, 2022

Company :	Westinghouse Electric Company, LLC
Address :	PO Drawer R
	Columbia, South Carolina 29205
Contact:	Ms. Cynthia Teague
Project:	Sealand Soil Sampling

Client Sample ID:	S-4/6-3	Project:	WNUC01222
Sample ID:	572654003	Client ID:	WNUC010

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

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: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-6-1
Sample ID: 572654001
Matrix: Soil
Collect Date: 04-MAR-22 09:37
Receive Date: 09-MAR-22
Collector: Client

Project: WNUC01222
Client ID: WNUC010

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.68	+/-0.526	0.346	0.500	pCi/g			BV1	03/19/22	1104	2239281	1
Uranium-235/236	U	0.229	+/-0.233	0.231	0.500	pCi/g							
Uranium-238		1.51	+/-0.491	0.273	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.0556	+/-0.428	0.734	1.00	pCi/g			AG2	03/16/22	2222	2239256	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AA1	03/10/22	0815	2239274

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, "Dry Weight Corrected"			90.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.8	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-6-2
Sample ID: 572654002
Matrix: Soil
Collect Date: 04-MAR-22 09:42
Receive Date: 09-MAR-22
Collector: Client

Project: WNUC01222
Client ID: WNUC010

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.39	+/-0.454	0.268	0.500	pCi/g			BV1	03/19/22	1104	2239281	1
Uranium-235/236	U	-0.0214	+/-0.0947	0.247	0.500	pCi/g							
Uranium-238		1.45	+/-0.460	0.221	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.280	+/-0.445	0.771	1.00	pCi/g			AG2	03/16/22	2325	2239256	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AA1	03/10/22	0815	2239274

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, "Dry Weight Corrected"			98.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			73.7	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-4/6-3
Sample ID: 572654003
Matrix: Soil
Collect Date: 04-MAR-22 09:51
Receive Date: 09-MAR-22
Collector: Client
Moisture: 11%

Project: WNUC01222
Client ID: WNUC010

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.36	+/-0.476	0.360	0.500	pCi/g			BV1	03/19/22	1104	2239281	1
Uranium-235/236	U	0.0471	+/-0.133	0.141	0.500	pCi/g							
Uranium-238		0.813	+/-0.370	0.295	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.00648	+/-0.413	0.706	1.00	pCi/g			AG2	03/17/22	0027	2239256	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AA1	03/10/22	0815	2239274

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, "Dry Weight Corrected"			90.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.8	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: March 22, 2022

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

Columbia, South Carolina 29205
Contact: Ms. Cynthia Teague
Project: Sealand Soil Sampling

Client Sample ID: S-4-4
Sample ID: 572654004
Matrix: Soil
Collect Date: 04-MAR-22 10:08
Receive Date: 09-MAR-22
Collector: Client

Project: WNUC01222
Client ID: WNUC010

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.65	+/-0.460	0.239	0.500	pCi/g			BV1	03/19/22	1104	2239281	1
Uranium-235/236	U	0.0984	+/-0.156	0.216	0.500	pCi/g							
Uranium-238		1.41	+/-0.421	0.175	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.107	+/-0.388	0.667	1.00	pCi/g			AG2	03/17/22	0130	2239256	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AA1	03/10/22	0815	2239274

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, "Dry Weight Corrected"			72.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.5	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: March 22, 2022

Company :	Westinghouse Electric Company, LLC
Address :	PO Drawer R
	Columbia, South Carolina 29205
Contact:	Ms. Cynthia Teague
Project:	Sealand Soil Sampling

Client Sample ID:	S-4-5	Project:	WNUC01222
Sample ID:	572654005	Client ID:	WNUC010
Matrix:	Soil		
Collect Date:	04-MAR-22 10:17		
Receive Date:	09-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.60	+/-0.497	0.350	0.500	pCi/g			BV1	03/19/22	1104	2239281	1
Uranium-235/236	U	0.211	+/-0.215	0.213	0.500	pCi/g							
Uranium-238		1.86	+/-0.513	0.172	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.00816	+/-0.401	0.686	1.00	pCi/g			AG2	03/17/22	0345	2239256	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AA1	03/10/22	0815	2239274

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, "Dry Weight Corrected"			62.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.7	(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

QC Summary

Report Date: March 22, 2022

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

Contact: **Ms. Cynthia Teague**

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
QC1205042651 LCS											
1,1,1,2-Tetrachloroethane	50.0			47.2	ug/kg		94	(75%-126%)	JM6	03/16/22	08:35
1,1,1-Trichloroethane	50.0			48.0	ug/kg		96	(71%-131%)			
1,1,2,2-Tetrachloroethane	50.0			54.2	ug/kg		108	(69%-123%)			
1,1,2-Trichloroethane	50.0			49.6	ug/kg		99	(73%-117%)			
1,1-Dichloroethane	50.0			48.5	ug/kg		97	(72%-121%)			
1,1-Dichloroethylene	50.0			43.5	ug/kg		87	(68%-128%)			
1,2,3-Trichloropropane	50.0			52.6	ug/kg		105	(72%-120%)			
1,2,4-Trichlorobenzene	50.0			48.0	ug/kg		96	(66%-128%)			
1,2-Dibromo-3-chloropropane	50.0			44.7	ug/kg		89	(61%-134%)			
1,2-Dibromoethane	50.0			48.5	ug/kg		97	(76%-122%)			
1,2-Dichloroethane	50.0			47.2	ug/kg		94	(66%-119%)			
1,2-Dichloropropane	50.0			51.0	ug/kg		102	(71%-120%)			
2-Butanone	250			234	ug/kg		94	(61%-134%)			
2-Hexanone	250			232	ug/kg		93	(58%-146%)			

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
4-Methyl-2-pentanone	250			234	ug/kg		93	(65%-126%)	JM6	03/16/22	08:35
Acetone	250		B	243	ug/kg		97	(60%-138%)			
Acetonitrile	1250			1310	ug/kg		105	(56%-124%)			
Benzene	50.0			53.0	ug/kg		106	(71%-120%)			
Bromodichloromethane	50.0			47.3	ug/kg		95	(72%-130%)			
Bromoform	50.0			47.1	ug/kg		94	(65%-134%)			
Bromomethane	50.0			46.5	ug/kg		93	(61%-138%)			
Carbon disulfide	250			258	ug/kg		103	(68%-133%)			
Carbon tetrachloride	50.0			47.9	ug/kg		96	(70%-136%)			
Chlorobenzene	50.0			49.5	ug/kg		99	(73%-118%)			
Chloroethane	50.0			47.1	ug/kg		94	(67%-125%)			
Chloroform	50.0			50.2	ug/kg		100	(75%-124%)			
Chloromethane	50.0			47.8	ug/kg		96	(55%-131%)			
Dibromochloromethane	50.0			43.9	ug/kg		88	(72%-130%)			
Dibromomethane	50.0			51.2	ug/kg		102	(74%-121%)			

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
Dichlorodifluoromethane	50.0			42.4	ug/kg		85	(48%-156%)	JM6	03/16/22	08:35
Ethylbenzene	50.0			50.5	ug/kg		101	(71%-118%)			
Iodomethane	250			253	ug/kg		101	(70%-127%)			
Methylene chloride	50.0			45.6	ug/kg		91	(70%-120%)			
Styrene	50.0			49.4	ug/kg		99	(72%-124%)			
Tetrachloroethylene	50.0			47.4	ug/kg		95	(70%-125%)			
Toluene	50.0			50.9	ug/kg		102	(71%-119%)			
Trichloroethylene	50.0			52.9	ug/kg		106	(72%-117%)			
Trichlorofluoromethane	50.0			45.2	ug/kg		90	(65%-131%)			
Vinyl acetate	250			213	ug/kg		85	(59%-136%)			
Vinyl chloride	50.0			43.6	ug/kg		87	(64%-132%)			
Xylenes (total)	150			154	ug/kg		103	(68%-124%)			
cis-1,3-Dichloropropylene	50.0			47.3	ug/kg		95	(74%-129%)			
trans-1,2-Dichloroethylene	50.0			45.9	ug/kg		92	(71%-122%)			
trans-1,3-Dichloropropylene	50.0			45.5	ug/kg		91	(74%-125%)			

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 2241941										
**1,2-Dichloroethane-d4	50.0			45.9	ug/L		92	(76%-127%)	JM6	03/16/22 08:35
**Bromofluorobenzene	50.0			50.9	ug/L		102	(70%-130%)		
**Toluene-d8	50.0			47.7	ug/L		95	(81%-120%)		
QC1205042652 MB										
1,1,1,2-Tetrachloroethane			U	ND	ug/kg					03/16/22 10:23
1,1,1-Trichloroethane			U	ND	ug/kg					
1,1,2,2-Tetrachloroethane			U	ND	ug/kg					
1,1,2-Trichloroethane			U	ND	ug/kg					
1,1-Dichloroethane			U	ND	ug/kg					
1,1-Dichloroethylene			U	ND	ug/kg					
1,2,3-Trichloropropane			U	ND	ug/kg					
1,2,4-Trichlorobenzene			U	ND	ug/kg					
1,2-Dibromo-3-chloropropane			U	ND	ug/kg					
1,2-Dibromoethane			U	ND	ug/kg					
1,2-Dichloroethane			U	ND	ug/kg					
1,2-Dichloropropane			U	ND	ug/kg					

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
2-Butanone			U	ND	ug/kg				JM6	03/16/22	10:23
2-Chloro-1,3-butadiene			U	ND	ug/kg						
2-Hexanone			U	ND	ug/kg						
4-Methyl-2-pentanone			U	ND	ug/kg						
Acetone			J	3.95	ug/kg						
Acetonitrile			U	ND	ug/kg						
Acrolein			U	ND	ug/kg						
Acrylonitrile			U	ND	ug/kg						
Allyl chloride			U	ND	ug/kg						
Benzene			U	ND	ug/kg						
Bromodichloromethane			U	ND	ug/kg						
Bromoform			U	ND	ug/kg						
Bromomethane			U	ND	ug/kg						
Carbon disulfide			U	ND	ug/kg						
Carbon tetrachloride			U	ND	ug/kg						

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
Chlorobenzene			U	ND	ug/kg				JM6	03/16/22	10:23
Chloroethane			U	ND	ug/kg						
Chloroform			U	ND	ug/kg						
Chloromethane			U	ND	ug/kg						
Dibromochloromethane			U	ND	ug/kg						
Dibromomethane			U	ND	ug/kg						
Dichlorodifluoromethane			U	ND	ug/kg						
Ethyl methacrylate			U	ND	ug/kg						
Ethylbenzene			U	ND	ug/kg						
Iodomethane			U	ND	ug/kg						
Isobutyl alcohol			U	ND	ug/kg						
Methacrylonitrile			U	ND	ug/kg						
Methyl methacrylate			U	ND	ug/kg						
Methylene chloride			U	ND	ug/kg						
Pentachloroethane			U	ND	ug/kg						

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch 2241941											
Propionitrile			U	ND	ug/kg				JM6	03/16/22	10:23
Styrene			U	ND	ug/kg						
Tetrachloroethylene			U	ND	ug/kg						
Toluene			U	ND	ug/kg						
Trichloroethylene			U	ND	ug/kg						
Trichlorofluoromethane			U	ND	ug/kg						
Vinyl acetate			U	ND	ug/kg						
Vinyl chloride			U	ND	ug/kg						
Xylenes (total)			U	ND	ug/kg						
bis(2-Chloro-1-methylethyl)ether			U	ND	ug/kg						
cis-1,3-Dichloropropylene			U	ND	ug/kg						
trans-1,2-Dichloroethylene			U	ND	ug/kg						
trans-1,3-Dichloropropylene			U	ND	ug/kg						
trans-1,4-Dichloro-2-butene			U	ND	ug/kg						
**1,2-Dichloroethane-d4	50.0			47.2	ug/L		94	(76%-127%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
**Bromofluorobenzene	50.0				51.0	ug/L		102	(70%-130%)	JM6	03/16/22	10:23
**Toluene-d8	50.0				49.1	ug/L		98	(81%-120%)			
QC1205042653 572443001 PS												
1,1,1,2-Tetrachloroethane	50.0	U	ND		39.3	ug/L		79	(52%-129%)		03/16/22	17:12
1,1,1-Trichloroethane	50.0	U	ND		38.2	ug/L		76	(60%-135%)			
1,1,2,2-Tetrachloroethane	50.0	U	ND		55.4	ug/L		111	(53%-130%)			
1,1,2-Trichloroethane	50.0	U	ND		52.3	ug/L		105	(51%-132%)			
1,1-Dichloroethane	50.0	U	ND		45.8	ug/L		92	(62%-124%)			
1,1-Dichloroethylene	50.0	U	ND		34.0	ug/L		68	(53%-136%)			
1,2,3-Trichloropropane	50.0	U	ND		57.0	ug/L		114	(60%-130%)			
1,2,4-Trichlorobenzene	50.0	U	ND		38.3	ug/L		77	(29%-142%)			
1,2-Dibromo-3-chloropropane	50.0	U	ND		41.1	ug/L		82	(42%-135%)			
1,2-Dibromoethane	50.0	U	ND		48.5	ug/L		97	(55%-129%)			
1,2-Dichloroethane	50.0	U	ND		45.6	ug/L		91	(58%-122%)			
1,2-Dichloropropane	50.0	U	ND		46.5	ug/L		93	(56%-121%)			
2-Butanone	250	U	ND		221	ug/L		88	(36%-139%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
2-Hexanone	250	U	ND		231	ug/L		92	(32%-146%)	JM6	03/16/22	17:12
4-Methyl-2-pentanone	250	U	ND		245	ug/L		98	(48%-131%)			
Acetone	250	BJ	3.43	B	217	ug/L		86	(33%-148%)			
Acetonitrile	1250	U	ND		961	ug/L		77	(42%-135%)			
Benzene	50.0	U	ND		47.1	ug/L		94	(54%-126%)			
Bromodichloromethane	50.0	U	ND		43.1	ug/L		86	(56%-130%)			
Bromoform	50.0	U	ND		52.5	ug/L		105	(50%-136%)			
Bromomethane	50.0	U	ND		32.0	ug/L		64	(33%-139%)			
Carbon disulfide	250	U	ND		193	ug/L		77	(49%-139%)			
Carbon tetrachloride	50.0	U	ND		37.6	ug/L		75	(51%-138%)			
Chlorobenzene	50.0	U	ND		43.3	ug/L		87	(46%-126%)			
Chloroethane	50.0	U	ND		28.2	ug/L		56	(48%-126%)			
Chloroform	50.0	U	ND		46.7	ug/L		93	(61%-126%)			
Chloromethane	50.0	U	ND		35.4	ug/L		71	(44%-143%)			
Dibromochloromethane	50.0	U	ND		44.3	ug/L		89	(53%-132%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
Dibromomethane	50.0	U	ND		45.2	ug/L		90	(59%-122%)	JM6	03/16/22	17:12
Dichlorodifluoromethane	50.0	U	ND		23.6	ug/L		47	(45%-149%)			
Ethylbenzene	50.0	U	ND		42.7	ug/L		85	(43%-128%)			
Iodomethane	250	U	ND		198	ug/L		79	(50%-135%)			
Methylene chloride	50.0	J	2.02		40.6	ug/L		77	(56%-124%)			
Styrene	50.0	U	ND		39.2	ug/L		78	(39%-132%)			
Tetrachloroethylene	50.0	U	ND		41.9	ug/L		84	(46%-134%)			
Toluene	50.0	J	0.430		50.6	ug/L		100	(52%-127%)			
Trichloroethylene	50.0	U	ND		46.0	ug/L		92	(52%-132%)			
Trichlorofluoromethane	50.0	U	ND		30.0	ug/L		60	(52%-130%)			
Vinyl acetate	250	U	ND		70.0	ug/L		28*	(38%-136%)			
Vinyl chloride	50.0	U	ND		30.0	ug/L		60	(53%-138%)			
Xylenes (total)	150				123	ug/L		82	(40%-132%)			
cis-1,3-Dichloropropylene	50.0	U	ND		42.1	ug/L		84	(49%-133%)			
trans-1,2-Dichloroethylene	50.0	U	ND		41.0	ug/L		82	(54%-126%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS											
Batch 2241941											
trans-1,3-Dichloropropylene	50.0	U	ND		47.8	ug/L		96	(49%-134%)	JM6	03/16/22 17:12
**1,2-Dichloroethane-d4	50.0		46.7		47.9	ug/L		96	(76%-127%)		
**Bromofluorobenzene	50.0		50.6		57.6	ug/L		115	(70%-130%)		
**Toluene-d8	50.0		47.8		52.4	ug/L		105	(81%-120%)		
QC1205042654 572443001 PSD											
1,1,1,2-Tetrachloroethane	50.0	U	ND		41.6	ug/L	6	83	(0%-20%)		03/16/22 17:39
1,1,1-Trichloroethane	50.0	U	ND		42.1	ug/L	10	84	(0%-20%)		
1,1,2,2-Tetrachloroethane	50.0	U	ND		52.3	ug/L	6	105	(0%-20%)		
1,1,2-Trichloroethane	50.0	U	ND		49.3	ug/L	6	99	(0%-20%)		
1,1-Dichloroethane	50.0	U	ND		45.6	ug/L	0	91	(0%-20%)		
1,1-Dichloroethylene	50.0	U	ND		38.4	ug/L	12	77	(0%-20%)		
1,2,3-Trichloropropane	50.0	U	ND		53.0	ug/L	7	106	(0%-20%)		
1,2,4-Trichlorobenzene	50.0	U	ND		33.8	ug/L	13	68	(0%-20%)		
1,2-Dibromo-3-chloropropane	50.0	U	ND		40.8	ug/L	1	82	(0%-20%)		
1,2-Dibromoethane	50.0	U	ND		46.9	ug/L	3	94	(0%-20%)		
1,2-Dichloroethane	50.0	U	ND		45.6	ug/L	0	91	(0%-20%)		

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
1,2-Dichloropropane	50.0	U	ND		47.0	ug/L	1	94	(0%-20%)	JM6	03/16/22	17:39
2-Butanone	250	U	ND		224	ug/L	1	90	(0%-20%)			
2-Hexanone	250	U	ND		233	ug/L	1	93	(0%-20%)			
4-Methyl-2-pentanone	250	U	ND		235	ug/L	4	94	(0%-20%)			
Acetone	250	BJ	3.43	B	229	ug/L	5	90	(0%-20%)			
Acetonitrile	1250	U	ND		1140	ug/L	17	91	(0%-20%)			
Benzene	50.0	U	ND		47.6	ug/L	1	95	(0%-20%)			
Bromodichloromethane	50.0	U	ND		44.0	ug/L	2	88	(0%-20%)			
Bromoform	50.0	U	ND		46.9	ug/L	11	94	(0%-20%)			
Bromomethane	50.0	U	ND		46.3	ug/L	37*	93	(0%-20%)			
Carbon disulfide	250	U	ND		226	ug/L	16	90	(0%-20%)			
Carbon tetrachloride	50.0	U	ND		40.7	ug/L	8	81	(0%-20%)			
Chlorobenzene	50.0	U	ND		43.7	ug/L	1	87	(0%-20%)			
Chloroethane	50.0	U	ND		37.7	ug/L	29*	75	(0%-20%)			
Chloroform	50.0	U	ND		46.9	ug/L	1	94	(0%-20%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
Chloromethane	50.0	U	ND		47.2	ug/L	28*	94	(0%-20%)	JM6	03/16/22	17:39
Dibromochloromethane	50.0	U	ND		42.5	ug/L	4	85	(0%-20%)			
Dibromomethane	50.0	U	ND		47.0	ug/L	4	94	(0%-20%)			
Dichlorodifluoromethane	50.0	U	ND		32.4	ug/L	32*	65	(0%-20%)			
Ethylbenzene	50.0	U	ND		43.3	ug/L	1	87	(0%-20%)			
Iodomethane	250	U	ND		229	ug/L	15	92	(0%-20%)			
Methylene chloride	50.0	J	2.02		44.4	ug/L	9	85	(0%-20%)			
Styrene	50.0	U	ND		41.5	ug/L	6	83	(0%-20%)			
Tetrachloroethylene	50.0	U	ND		40.4	ug/L	4	81	(0%-20%)			
Toluene	50.0	J	0.430		48.1	ug/L	5	95	(0%-20%)			
Trichloroethylene	50.0	U	ND		46.5	ug/L	1	93	(0%-20%)			
Trichlorofluoromethane	50.0	U	ND		36.6	ug/L	20	73	(0%-20%)			
Vinyl acetate	250	U	ND		65.1	ug/L	7	26*	(0%-20%)			
Vinyl chloride	50.0	U	ND		40.6	ug/L	30*	81	(0%-20%)			
Xylenes (total)	150				129	ug/L	5	86	(0%-20%)			

QC Summary

Workorder: **572654**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS												
Batch 2241941												
cis-1,3-Dichloropropylene	50.0	U	ND		43.4	ug/L	3	87	(0%-20%)	JM6	03/16/22	17:39
trans-1,2-Dichloroethylene	50.0	U	ND		40.7	ug/L	1	81	(0%-20%)			
trans-1,3-Dichloropropylene	50.0	U	ND		44.6	ug/L	7	89	(0%-20%)			
**1,2-Dichloroethane-d4	50.0		46.7		47.1	ug/L		94	(76%-127%)			
**Bromofluorobenzene	50.0		50.6		53.8	ug/L		108	(70%-130%)			
**Toluene-d8	50.0		47.8		49.4	ug/L		99	(81%-120%)			

Notes:

The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	The target analyte was detected in the associated blank.
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Concentration of the target analyte exceeds the instrument calibration range
H	Analytical holding time was exceeded
J	See case narrative for an explanation
J	Value is estimated
JNX	Non Calibrated Compound
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

QC Summary

Workorder: **572654**

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

P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

UJ Compound cannot be extracted

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

^ 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.

QC Summary

Report Date: March 22, 2022

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

Contact: **Ms. Cynthia Teague**

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 2239281										
QC1205037871 572654001 DUP										
Uranium-233/234		1.68		1.63	pCi/g	3.55		(0%-20%)	BV1	03/19/22 11:04
Uranium-235/236	U	0.229	U	0.0310	pCi/g	N/A		N/A		
Uranium-238		1.51		1.32	pCi/g	13.1		(0%-20%)		
QC1205037872 LCS										
Uranium-233/234				12.5	pCi/g					03/19/22 11:04
Uranium-235/236				0.849	pCi/g					
Uranium-238	13.5			13.7	pCi/g		102	(75%-125%)		
QC1205037870 MB										
Uranium-233/234			U	-0.0589	pCi/g					03/19/22 11:04
Uranium-235/236			U	-0.00706	pCi/g					
Uranium-238			U	-0.00476	pCi/g					
Rad Liquid Scintillation										
Batch 2239256										
QC1205037853 572654001 DUP										
Technetium-99	U	-0.0556	U	-0.195	pCi/g	N/A		N/A	AG2	03/17/22 05:50
QC1205037854 LCS										
Technetium-99	22.5			22.3	pCi/g		99	(75%-125%)		03/17/22 06:52

QC Summary

Workorder: **572654**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch 2239256											
QC1205037852 MB											
Technetium-99			U	-0.287	pCi/g				AG2	03/17/22	04:47

Notes:

The Qualifiers in this report are defined as follows:

**	Analyte is a Tracer compound
<	Result is less than value reported
>	Result is greater than value reported
BD	Results are either below the MDC or tracer recovery is low
FA	Failed analysis.
H	Analytical holding time was exceeded
J	See case narrative for an explanation
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

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

QC Summary

Workorder: **572654**

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

GC/MS Volatile

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 28
Analytical Batch: 2241941

Preparation Method: SW846 5035
Preparation Procedure: GL-OA-E-039 REV# 13
Preparation Batch: 2241938

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

GEL Sample ID#	Client Sample Identification
572654003	S-4/6-3
1205042651	Laboratory Control Sample (LCS)
1205042652	Method Blank (MB)
1205042653	572443001(NonSDG) Post Spike (PS)
1205042654	572443001(NonSDG) Post Spike Duplicate (PSD)

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

Continuing Calibration Verification Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8260D for sample 572654003 (S-4/6-3) and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8260D outlier acceptance criteria. The results are reported.

Quality Control (QC) Information

Matrix Spike/Matrix Spike Duplicate Recovery Statement
The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits. The recoveries were similar. It is believed possible matrix interference has been demonstrated.

Sample	Analyte	Value
1205042653 (Non SDG 572443001PS)	Vinyl acetate	28* (38%-136%)
1205042654 (Non SDG 572443001PSD)	Vinyl acetate	26* (38%-136%)

Relative Percent Difference (RPD) Statement
The RPD between the matrix spike pair (See Below) were not all within the acceptance limits. However, the spike recoveries passed. The unacceptable RPD may be attributed to matrix interference and/or sample non-homogeneity.

Sample	Analyte	Value
1205042653PS and 1205042654PSD (Non SDG 572443001)	Bromomethane	RPD 37* (0%-20%)
	Chloroethane	RPD 29* (0%-20%)
	Chloromethane	RPD 28* (0%-20%)
	Dichlorodifluoromethane	RPD 32* (0%-20%)
	Vinyl chloride	RPD 30* (0%-20%)

Radiochemistry

Product: **Alphaspec U,**
Analytical Method: DOE EML HASL-300, U-02-RC Modified
Analytical Procedure: GL-RAD-A-011 REV# 28
Analytical Batch: 2239281

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 24
Preparation Batch: 2239274

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

GEL Sample ID#	Client Sample Identification
572654001	S-6-1
572654002	S-6-2
572654003	S-4/6-3
572654004	S-4-4
572654005	S-4-5
1205037870	Method Blank (MB)
1205037871	572654001(S-6-1) Sample Duplicate (DUP)
1205037872	Laboratory Control Sample (LCS)

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

Data Summary:

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

Miscellaneous Information

Additional Comments
The tracer peak centroid for sample 1205037872 (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: **Dry Weight**
Preparation Method: ASTM D 2216 (Modified)
Preparation Procedure: GL-OA-E-020 REV# 13
Preparation Batch: 2239274

Preparation Method: Dry Soil Prep
Preparation Procedure: GL-RAD-A-021 REV# 24
Preparation Batch: 2239274

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

GEL Sample ID#	Client Sample Identification
572654001	S-6-1
572654002	S-6-2
572654003	S-4/6-3
572654004	S-4-4
572654005	S-4-5
1205037868	572654001(S-6-1) Sample Duplicate (DUP)

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

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: **Liquid Scint Tc99, Soil**
Analytical Method: DOE EML HASL-300, Tc-02-RC Modified
Analytical Procedure: GL-RAD-A-059 REV# 5
Analytical Batch: 2239256

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

GEL Sample ID#	Client Sample Identification
572654001	S-6-1
572654002	S-6-2
572654003	S-4/6-3
572654004	S-4-4
572654005	S-4-5
1205037852	Method Blank (MB)
1205037853	572654001(S-6-1) Sample Duplicate (DUP)

1205037854 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 1

Project # SEALAND SOIL SAMPLING

GEL Quote #:

GEC Number (1):

PO Number: #4500822910 LN 1

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

572654

Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Project Manager:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Westinghouse Electric CO. Phone # 803-312-4171

Project/Site Name: Sealand removal S-4 & S-6 Fax #

Address: 5801 Bluff Rd. Hopkins SC 29061

Collected By: R. Crews Send Results To: C. Teague

572654

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

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (Please supply isotope info.)	Should this sample be considered: (7) Known or possible hazards	Total number of containers	ASP U	Tc-99	VOC	<-- Preservative Type (6)	Comments
S-6-1	03-04-22	0937	G		SO			1	X	X			Note: extra sample is required for sample specific QC
S-6-2	03-04-22	0942	G		SO			1	X	X			
S-4/6-3	03-04-22	0951	G		SO			5	X	X	X		
S-4-4	03-04-22	1008	G		SO			1	X	X			
S-4-5	03-04-22	1017	G		SO			1	X	X			

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 R. Crews	3/8/22	1007	1 D. Dockter	3/8/22	1007
2 D. Dockter → Sewar Location	3/9/22	0945	2		
3	3.9.22	1415	3 Shyasta Patel	3/9/22	1450

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

TAT Requested: Normal: ____ Rush: X Specify: 2 WKS (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:** 2 °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?*

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

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

TSCA Regulated
PCB = Polychlorinated biphenyls

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

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

SH

Client: UNUC

SDG/AR/COC/Work Order: 572654 / 572656

Received By: TYE

Date Received: 3/9/22

Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Carrier and Tracking Number

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr. Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: TEMP: 2C. *all temperatures are recorded in Celsius
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials NRG Date 3/10/22 Page 1 of 1

GL-CHL-SR-001 R

List of current GEL Certifications as of 22 March 2022

State	Certification
Alabama	42200
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	SC000122021−1
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	T104704235−21−19
Utah NELAP	SC000122021−36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780